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Regulated Humidity, Filtered Air Highlight New G-E Refrigerators

1940 Line Has 13 Regular Models Plus 3 Units Held Over From '39

BRIDGEPORT, Conn.—Stressing selective inside refrigerator air conditions to a greater extent than ever before through the introduction of controlled humidity and a newly developed air filter, General Electric is presenting three new lines of refrigerators for 1940.

Thirteen new models are offered in the three regular series, in addition to three miscellaneous models retained from 1939. In the new group is a low-priced 8-cu. ft. model designed particularly to suit the needs of rural customers.

Considered from the angle of capacity alone, the new lines consist of a "four," three "fives," four "sixes," three "eights," a "twelve," and a "sixteen." The classifying figures represent the capacity in cubic feet only approximately, since in many cases the capacity has been increased over comparable models of last year.

In the top or "Deluxe" line for 1940, appearance has been changed in respect to nameplate, latch handle, grille base, illuminated control, evaporator door, and stainless steel shelves, while the utility has been improved by the use of two vegetable pans having better temperature conditions than the single pan used previously, through individual humidity control, provision for alternate stacking of pans, automatic humidity control for the cold storage compartment, and the air filter.

The exterior Ionic column fluting design has been retained from 1939 models, but the design of the base grille has been changed with gracefully shaped gray louvers forming a background for the polished stainless steel front. Three models—a "five," "six" and "eight"—are available in glyptal finish over bonderized steel, while similar models plus a "twelve" and "sixteen" may be obtained in porcelain finish.

In the interior a lighted center control panel of clear plastic and a newly designed evaporator door finished in white glyptal make for greater eye appeal. A new spring

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Philadelphia Plant To Rebuild Refrigerators On Broadened Scale

PHILADELPHIA—First effort to handle reconditioning of used refrigerators on a broad scale geographically is to be made this year by the Associated Refrigerator Plant, Inc. of this city, with a plan for setting up receiving "depots" throughout the eastern and northern half of the country.

Geographic limits established for the trial of the plan extend the limits to as far west as the Des Moines-Kansas City line, and south as far as Memphis and Knoxville.

Mechanics of the plan are as follows: The Associated Refrigerator Plant will have traveling representatives who will have definite schedules for stops at distributor depots. A distributor in a given area will warehouse all trade-in boxes for his dealers.

At the time that a distributor takes a trade-in into his warehouse he will tag it clearly with the model and make as well as the dealer's name to whom it belongs.

When the representative of the Associated Refrigerator Plant arrives on a visit to the distributor's depot, he will check over carefully this stock of trade-in cabinets with the representative of the distributor, and a

(Concluded on Page 20, Column 2)

Mills Moves Up



REESE MILLS

Mills Fills Cosgrove's Post At Westinghouse

MANSFIELD, Ohio—Appointment of Reese Mills as assistant sales manager of the Westinghouse Electric & Mfg. Co.'s merchandising division, is announced by Frank R. Kohnstamm, sales manager.

Mr. Mills, who for 15 years has been manager of the Westinghouse range and water heater department, will be responsible for coordination of the merchandising division's sales activities in his new position. The appointment, which is effective immediately, fills the vacancy created by the recent resignation of Raymond C. Cosgrove.

Mr. Kohnstamm also announced the appointment of R. M. Beatty, sales development manager of the range and water heater department since June, 1937, to succeed Mr. Mills as manager of that department.

Mr. Mills, a native of Tunnel Hill, Ga., graduated from Georgia Tech and spent one year in the United States Army, with the rank of Second Lieutenant in the Field Artillery. After the World War, he started with Westinghouse in February, 1919, and spent a year in the student's course offered by the company.

He worked in various departments and in March, 1920, came to Mansfield, starting as an order clerk, and later entering the sales end of

(Concluded on Page 20, Column 2)

New Commercial Credit Plan Has 'Dealer Reserve'

NEW YORK CITY—New appliance finance plans for 1940 calling for a considerable reduction in finance charges required of the buyer and featuring a "dealer reserve plan" to protect retailers against losses on repossessions have recently been put into effect by Commercial Credit Co.

General reduction in finance rates applies to radios and other home appliances, as well as to refrigerators. The dealer reserve plan, the company says, is designed to "compensate the dealer for the special expenses that are incident to merchandising under a time-payment method of selling."

In operation, the plan sets up a "reserve fund" for each dealer financing through Commercial Credit of an amount equal to 3% of the dollar volume of his time-payment sales, for his use as a "cushion" in easing losses sustained through possible repossessions.

Repossessions, on a national scale, will average about 6% of total installment volume, it is estimated, so that this reserve fund permits the dealer to sell his repossessions, if necessary at 50 cents on the dollar and still "break even" on his time-payment sales, the company asserts.

Amount of money in each dealer's

(Concluded on Page 20, Column 1)

Kelvinator Opens New Zone Headquarters In Kansas City

KANSAS CITY, Mo.—The Kelvinator-Leonard household appliance division has leased a building of 8,000 sq. ft. floor space at 2601 Walnut St. here to house its new factory branch and zone headquarters. Shift in location follows a shift in company policy from independent distributor to branch operation in this territory.

Area to be served by the branch includes Missouri, Kansas, Nebraska, Iowa, and parts of Oklahoma, Kentucky, and Illinois. It also will be general Nash-Kelvinator headquarters in Kansas City. A sub-branch will be maintained in St. Louis, with warehouses in Omaha, Des Moines, and other cities.

Don Keller has been named branch manager of the company's household appliance division, and E. W. Lathrop is being transferred from Detroit as branch and zone comptroller.

Ellis Ross, formerly with Richards & Conover Hardware Co., which will continue as distributor of Kelvinator commercial refrigeration equipment, has been appointed sales supervisor in the Kansas City area.

G-E Revamps Air-Conditioning & Commercial Refrigeration Sales Set-Up; Harrington & Hulett Share Field Management

BLOOMFIELD, N. J.—After more than a decade of building and selling heating, air conditioning, and commercial refrigeration products, General Electric Co. has decided to revise completely its merchandising program for these lines in order to place greater emphasis on the problem of distribution, it has been announced by Stuart M. Crocker, manager of the G-E air conditioning and commercial refrigeration department. The new program will go into effect immediately.

"Our new plans are evolutionary, not revolutionary," Mr. Crocker stated. "Increased emphasis on sales is the natural outgrowth of better products and rising public acceptance, and it must have the industry's prime consideration if we are to continue a healthy growth. Automatic heating, air conditioning, and commercial refrigeration units are no longer 'engineering' items, any more than

are electrical appliances for the home. They have developed, as have household refrigerators and ranges, into commodities that must be merchandised. Our thinking along these lines has resulted in the new program."

The shifting of many executives to positions requiring closer contact with the selling organization is the keynote of the plan. Twice as many men as formerly will be in direct touch with field operations, and henceforth G-E representatives will spend, in total man hours, an average of more than a month a year with each major distributor. Increased sales training services, actual sales assistance, and expanding promotional activities are functions of the new set-up.

Accompanying the sales changes is the consolidation of design, engineering, and service into a single division, whose functions and field

'Cold Wall' Principle Extended To 7 Frigidaire Units This Year

York Head



STUART E. LAUER

Lauer Advanced To York Presidency

YORK, Pa.—In a reorganization of the administrative set-up of York Ice Machinery Corp., William S. Shipley, president for the past 10 years, has been elected chairman of the board, and Stuart E. Lauer, formerly executive vice president, has been named president of the company.

The changes were made in order to give officials greater freedom from detail, and an opportunity for closer study of the company's operation, market, and policies, it was said. Volume of the company's business has shown considerable growth during the past year, especially in the most recent months.

In other official changes, Elmer A. Kleinschmidt was elected executive vice president to succeed Mr. Lauer, and Llewellyn Williams was named vice president in charge of engineering. Samuel J. Shipley was elected vice president and treasurer, and Vincent K. Keesey was elected secretary.

As chairman of the board, Mr. Shipley will continue in active service with the company. He said that the executive changes would "add materially to the efficiency of the organization, and at the same time bring some of the younger men to the front."

Mr. Lauer, new president of the corporation, is a native of York. His

(Concluded on Page 13, Column 1)

8 'Standard' Models With All Basic Features Fill Out '40 Line

DAYTON, Ohio—Extension of basic convenience features to cover every model in the line, and expansion of the "Cold Wall" principle into a complete series of seven models—these highlight the developments introduced by Frigidaire in its 1940 electric refrigerators.

New models incorporate improvements in economy, utility, operation, and appearance, including the introduction of color, and lines have been revised to offer a broader coverage of the consumer field. For example, there is no "Special" line in the 1940 series, and standard models include units in the Deluxe, Master, and Super-Value brackets only.

Basic price structure on 1940 Frigidaire models is essentially the same as last year, with the exception of a special Super-Value Six model, which has an announced price of \$129.75. This model has an exterior of Dulux, four ice trays with "Quickube" ice tray releases, and interior electric light.

Zone 2 (Detroit) suggested retail prices on other models in the Frigidaire 1940 line are as follows:

STANDARD SERIES

Deluxe 6-40	\$209.50
Deluxe 5-40	189.50
Master 6-40	179.50
Master 5-40	164.50
Super-Value 8-40	189.50
Super-Value 6-40	154.50
Super-Value 4-40	139.50
Super-Value 3	119.50

COLD-WALL SERIES

Imperial 8-40	\$289.50
Imperial 6-40	249.50
Imperial 13-40	449.50
Deluxe 8-40	264.50
Deluxe 6-40	224.50
Master 6-40	209.50
Master 5-40	189.50

Last year Frigidaire introduced what it calls the "Cold Wall" principle in one line of refrigerators. In these models there are two separate compartments, each providing a different food keeping condition. Conventional refrigeration is supplied through removal of heat by the freezer in the upper section.

(Concluded on Page 2, Column 1)

Heating & Ventilating Exposition To Feature Over 300 Displays

CLEVELAND—Over 300 manufacturers will exhibit at the Sixth International Heating & Ventilating Exposition to be held the week of Jan. 22-26 at Lakeside Hall here. Annual meetings of the American Society of Heating & Ventilating Engineers and the National Warm Air Heating and Air Conditioning Association will be held concurrently with the Exposition.

The Exposition was held in Cleveland in 1932 and has since been held in Philadelphia, Chicago, and New York. Admission will be by registration.

Combustion and heating equipment will be represented by fuels, stokers, furnaces, oil burners, gas burners, boiler-burner units and furnace burner units.

Air-conditioning equipment, and refrigerating apparatus for use in connection with it, will be exhibited by many companies. Compressors on display will include one to be shown for the first time.

Other equipment in the combustion and heating section will include direct-connected, gas-engine-driven compressors; anthracite hopper burners with ash removers; refractory

(Concluded on Page 2, Column 5)

Frigidaire Extends Basic Features To All Models In 1940 Refrigerator Line

(Concluded from Page 1, Column 5)

The lower section, however, is refrigerated by a secondary system of coils concealed in the walls which remove heat through the walls largely by radiation.

Frigidaire is retaining the Cold Wall type of refrigeration this year, and is expanding its use into several models in the line.

Basically, the 1940 Cold Wall models operate in the same manner as those last year. However, the "dew fresh seal" glass shelf, which acts as a seal between the upper and lower compartments, now is equipped with a humidity control in the form of adjustable vents, permitting the amount of humidity in the Cold Wall section to be regulated as desired.

'COLD WALL' CHANGES

Evaporator in Cold Wall models this year is placed at the left side of the upper cabinet interior section, instead of in the middle, as was the case last year. Cooling of this upper compartment is accomplished by one side of the evaporator. This eliminates the necessity of using baffles on the evaporator, and does away with any possibility of "sweating" or overcooling in this compartment, Frigidaire engineers say.

Cold Wall coil is attached to the side of the evaporator nearest the cabinet wall. Chief advantage of the Cold Wall principle, say Frigidaire engineers, is that the almost complete absence of air motion in the section of the cabinet refrigerated through the walls. Walls, top, and bottom of this compartment are at the same temperature, it is said, so that there is no "wiping action" caused by air moving from one surface to another.

This absence of air motion, it is claimed, is as important to the keeping of uncovered foods without dehydration as is high humidity in the compartment itself.

Attractive exterior design, refinements of interior appearance, and the addition of new appointments both inside and outside, add new beauty to every model in the line. Especially distinctive is the new use of color.

DIFFERENT DOOR OPENING

Improvements in all 1940 cabinets include a door that opens flush with the inside wall. This facilitates use of sliding shelves and hydrators as these now may be moved forward even though the cabinet door is not swung wide. Door handles this year are massive, with chrome finish lending a decorative touch to the front of the cabinet.

Greater efficiency and operating economy is claimed for the Meter-Miser, Frigidaire cold making mechanism, through use of a more efficient motor and a slight re-design of the compressor construction to permit its use.

More complete coverage of the entire consumer field has been inaugurated in the 1940 Frigidaire lines, through the addition of new popular size models in the lower priced "Super-Value" line and introduction of the Cold Wall principle into three lines which makes this

type of refrigeration available at lower cost than before.

A total of 16 models is offered this year by Frigidaire in standard and Cold Wall series. Standard series includes a Table Top 3-cu. ft. size; Super-Value models in 3, 4, 6, and 8-cu. ft. sizes; Master models in 5 and 6-cu. ft. sizes; and Deluxe models in 5 and 6-cu. ft. sizes.

The Cold Wall series includes Cold Wall Master 5 and 6-cu. ft. sizes; Cold Wall Deluxe 6 and 8-cu. ft. sizes; and Cold Wall Imperial Porcelain 6, 8, and 12.5-cu. ft. sizes. Standard Dulux exterior finish is used for all lines except the Cold Wall Porcelain models, with all models having stainless porcelain surfaces inside.

All 1940 models retain such features as the one-piece steel cabinet; solid brass super-freezer; F-114 low-pressure refrigerant; automatic reset defroster; fast freezing all-metal ice trays; and Thermo-sealed insulation.

QUICK RELEASE TRAYS

In previous years, complete Quick-kube tray and grid release service was excluded from models in the lower price bracket. All 1940 household models have this convenience.

Heavy glass cold storage tray which fits below the freezer has been enlarged to offer considerably increased storage capacity for foods which require the intense cold temperatures existing below the freezer. The cold storage tray is standard equipment in the Super-Value and Master lines.

In the Deluxe and Cold Wall lines, a glass Meat Tender occupies the space immediately below the freezer. The Meat Tender, an innovation last year, has been improved for 1940 in that its size has been considerably increased and that it now slides out like a drawer. In addition to its prime use as a chest for storing fresh meats with proper humidity, temperature, and air circulation, the tray also provides extra storage space for ice cubes, canned goods requiring chilling, and other uses.

In 1940 models, the hydrator or vegetable storage container has the additional convenience of a glass cover which makes its contents visible without removing it from the cabinet. The glass lid also is usable as a shelf without interfering with the accessibility of the hydrator, which slides out like a drawer.

CHROMIUM SHELVEING

Shelf finish and arrangement have undergone changes in 1940 Frigidaire models. Every model, from the low-priced Super-Value line to the Cold Wall line, has stainless chromium finished shelves for lasting luster even under conditions of severe usage. The alteration in arrangement provides for more space between shelves, with consequent increase in convenience for food storage.

Interior cabinet lighting is standard on all 1940 models. An additional lighting feature in the Deluxe and Cold Wall models, however is the use of illumination in conjunction with the Unimatic single-dial cold control

panel. A light behind the panel makes it easier for the user to adjust the control to the temperature desired. Cold controls in all models retain the automatic reset defrosting function which permits defrosting simply by pressing a button on the control. Refrigeration is resumed automatically when the defrosting process is completed.

A new cold control mounting is introduced to models in the Master line, while in the Super-Value line the control and mounting is about the same in appearance as in last year's models, but includes mechanical improvements.

All Frigidaire models this year require less floor space for installation, with the introduction of a new method for ventilating the bottom section containing the Meter-Miser compressor and the condenser. The duct formerly used in the back of the cabinet has been removed, circulation now being effected with an opening in the rear of the cabinet.

Included with all models, starting with the Super-Value 4-cu. ft. size, is a new, more attractive freezer door. This door is of the easy open and close type, which cannot jam in event the cabinet door is closed without the freezer door being shut first, it is said.

HIDDEN HINGES

On all models, too, Frigidaire is using an improved version of its concealed hinges and ball-bearing door suspension.

An innovation this year in Frigidaire Deluxe models is a new double-duty shelf which may be moved to either side of the cabinet next to the freezer. The flexibility in the use of this shelf permits its location on the side of the cabinet most convenient for the user. The shelf is suspended from the cabinet wall by a bracket which locks the shelf in position.

As a part of the improvement in 1940 Cold Wall models, this line has a new type of sliding shelf and a lift-out section in the hydrator shelf, designed to make foods stored in the cabinet even more accessible than heretofore. Cold Wall Deluxe and Imperial models are equipped with two "window top" hydrators instead of the single hydrator found in the Master Deluxe, and Cold Wall Master lines.

'SUPER-VALUE' UNITS

With enlargement of the Super-Value line and addition of refinements to these lower priced models, Frigidaire anticipates active interest from a wider group of prospective buyers. Improvements have not materially affected the price level of the Super-Value line, if the 6-cu. ft. model, only size available in 1939, is used as a basis for comparison. The 1940 six will sell at approximately the same price as the 1939 six.

Addition of 3, 4, and 8-cu. ft. models to the Super-Value line, plus the 6-cu. ft. model which established the line in 1939, affords buyers a wide range of sizes from which to choose.

To serve the needs of the rapidly increasing farm market for a large-capacity refrigerator adaptable to unusual uses in connection with milk and poultry products storage, special shelf sets have been made available for the 8-cu. ft. model of the Super-Value series, converting this unit into a "farm Frigidaire."

Ten special interior arrangements for storage of milk, cream, eggs, and other products that require refrigeration before going to market are possible with the sets, it is claimed.

Product Advertising Program Expanded

Carrying the theme, "It's Big—It's Beautiful—It's a Bargain," Frigidaire's program of national magazine advertising will break for the early-season market, with the open blast scheduled for the Feb. 21 issue of Saturday Evening Post, and in the March issues of other national magazines.

Full-color spreads will announce the 1940 Frigidaire models, led off by the "Big—Beautiful—Bargain" caption and closing with the catchline, "Buy the Favorite—Buy Frigidaire." Copy points out that in this year's line are models "for every need and purse," and illustrates six major sales points on the models.

Augmenting the general magazine series on the entire line, a special campaign has been planned on models in the "Cold Wall" series alone,

Here's Frigidaire For '40



Exterior beauty has been given major consideration in 1940 Frigidaire design. The gleaming white porcelain finish has been augmented by eye-appealing chromium trim. This model is one of the seven included in the "Cold Wall" series for this year.



Illustrating a "Cold Wall" feature—the keeping of foods in the low cabinet section without the need of covering them. Evaporator on these models is at the left side of the cabinet instead of being centered, and the glass top dividing the interior into two compartments has adjustable louvers for humidity control of the lower section.

aimed at the replacement market, and using "class" publications such as House & Garden, House Beautiful, and National Geographic.

Other special campaigns on the refrigeration line include one aimed at the farm market, and covering Country Gentlemen, Farm Journal, and Electricity on the Farm; another on the new building field, and a third on the small-town market.

Newspaper advertisements will use cartoons as attention-getters, and low-price appeal will be used to attract store traffic to dealers' showrooms. A nationwide poster program also is scheduled for spring.

A national advertising campaign of major proportions also has been developed for the 1940 Frigidaire electric range line, with insertions in women's magazines as well as the mass-market periodicals.

"Cooking Can Be Fun" is the central theme around which most of the range advertisements will be built, and copy will tell the range story of speed, safety, and economy in conversational form, as one woman would tell another.

Cleveland Show Presents Variety of Products

(Concluded from Page 1, Column 5)

combustion chambers; automatic boiler return traps; and heating surfaces with steam distributing tubes. Precision instruments and automatic controls will be on display, which record and control such functions as pressure, volume, temperature, humidity, liquid flow, and liquid level.

Related items will include electric check drafts, "featherweight" room thermostats, attachments for barometric draft regulators, and several types of furnace damper regulators.

Fans and blowers of many types will be exhibited. A new blower uses blades of the conventional curvature and angle made from one continuous strip of steel.

Pipes, ducts, and conduits will reflect the use of a variety of materials to meet varied service requirements. Prefabricated ductwork and fittings will be shown.

Ready for You, Now—

JANUARY ISSUE OF

"ANSUL NEWS NOTES"

• Write today for this January 1940 issue of ANSUL NEWS NOTES—just off the press, featuring a new Ansul Laboratory Report on Ansul ICE-X. It's a big 12-paged issue packed with interesting news and information. If you are not on our mailing list for ANSUL NEWS NOTES, put yourself on today. No charge. Just use the coupon below.



MAIL THIS COUPON TODAY

ANSUL CHEMICAL CO., Marinette, Wisconsin
Gentlemen:
Please add me to the ANSUL NEWS NOTES free mailing list, and send at once a copy of the January issue.

Name _____
Firm _____
Address _____
City _____ State _____

ANSUL
SULPHUR DIOXIDE
METHYL CHLORIDE
ANSUL ICE-X

ANSUL CHEMICAL CO.
MARINETTE, WISCONSIN CA-3-3

There is an ANSUL JOBBER Near You

Will this be your advertisement?

THE SATURDAY EVENING POST

January 20, 1940

From top to floor there's space galore



Superb refrigerators in which, from top to floor, there's space galore . . . extra space set free by Rollator simplicity

See the new Norge at your Norge Dealer's after January 20

The Greater **NORGE** *for 1940*



Many dealers have gone NORGE!

There still may be an opening in your community . . . an opportunity to be with Norge in 1940. For complete information, wire or

Sign and mail the coupon today!

This full color advertisement in the *Saturday Evening Post* for January 20 opens the greatest magazine campaign in Norge history. Note that it tells women to see after January 20 the greater Norge in which, from top to floor, there's space galore. Will women in your community be attracted to *your* store?

NORGE DIVISION, BORG-WARNER CORPORATION
670 East Woodbridge, Detroit, Mich.

Without obligating me in any way, let me have complete information about Norge for 1940.

Name _____
Address _____
City _____ State _____

Odor Removal & Selective Humidity Top G-E Features For '40

(Concluded from Page 1, Column 1)
arrangement holds the evaporator door in either open or closed position. In the three largest models, evaporator backs have been closed in to provide a lower evaporator temperature for freezing and storage of foods.

The cold storage compartment introduced last year has been retained, but in the "twelve" and "sixteen" two compartments have been provided, each having an automatic adjustment for humidity control.

Two vegetable pans are employed instead of a single double-width pan, designed so that air will circulate around them more freely. Each has a clear glass cover, making it easier to determine the contents.

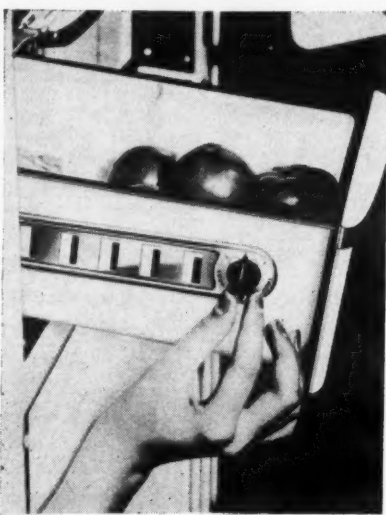
Each pan has a humidity control consisting of an adjustable shutter with dial control. The shutter is readily available for cleaning. The pans, lined with acid-resisting porcelain, are designed so that they can be stacked on either side for storage of large objects. When stacked, the upper pan will slide as well as the lower.

ODOR REMOVAL

For the purpose of removing food odors, long a refrigerator problem, a flat perforated aluminum container filled with activated carbon is mounted across the rear wall just below the interior light. Refills of new carbon will be available and replacement should be made about

once a year. About every three or four months the carbon can be reactivated by placing the entire filter in an oven for an hour at 350-400° temperature.

Stainless steel shelves are used throughout the "Deluxe" line, with highly polished T-rail fronts. Shelf stops have been redesigned and simplified. Porcelain-finish models are equipped with a dish set consisting of two large and one medium Pyrex casserole with covers that may be inverted for baking pies, two Pyrex leftover dishes, six Pyrex custard dishes in a wire rack, glass butter dish, glass water pitcher, and oil silk caps to fit all dishes.



A turn of the dial operates the adjustable shutter on the side of the vegetable pan, thus regulating the humidity.

The two "eights" in the "Deluxe" series have a 40% increase in refrigerating capacity and a 15% increase in efficiency over the corresponding 1939 models, say G-E engineers, and the motor horsepower has been increased from 1/2 to 3/4 hp.

The unit retains such standard G-E features as metal to glass leads; cast aluminum rotor, Scotch yoke compressor which is self-aligning to reduce friction; an oil pressure operated unloader which reduces starting friction and vibration; forced feed lubrication; oil cooling of the motor and compressor; internal spring mounting, low side case, and intake and exhaust mufflers; plate condenser cooled by natural draft, eliminating an extra motor and fan; high side float refrigerant control; stainless steel evaporator; single knob control; automatic reset overload, protecting the motor under abnormal power supply conditions; Tel-a-Frost indicator; removable evaporator shelf for the storage of bulky frozen foods; and quick ice trays.

The cabinet again offers such features as all-steel construction; textile breaker strips which are unaffected by moisture or odor; Thermocraft insulation; sliding and adjustable shelves; recessed interior light; and piano-type hinges.

"Low temperature is the one

important factor in reducing bacterial and mold growth and enzyme action causing spoilage," declares W. M. Timmerman, G-E refrigeration engineer, in discussing the food preservation qualities of the new G-E line. "Low temperature is also important in preserving the vitamin content of fresh foods.

VITAMIN C

"In one instance it has been shown that after seven days in a refrigerator, the vitamin 'C' content of spinach was practically as high as when fresh, but when stored at room temperature about half was lost in three days and all was destroyed in seven days. We are also interested in preserving food appearance, which normally suffers through loss of moisture.

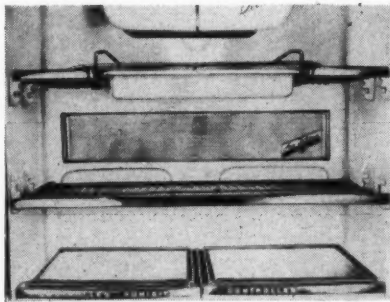
"If fresh foods were placed in a tightly covered container there would be no shrinkage, since moisture could not get out, but a small amount of drying is necessary to prevent excessive bacterial and mold growth and preserve flavor. The amount of drying can be controlled by adjusting the humidity control provided in the vegetable pans."

The Standard G-E line for 1940 consists of a "five" and a "six" having the same dimensions and general styling as last year, but with new nameplate, latch handle, and hinges. In the interior a larger sliding vegetable pan with split lower shelf is provided. The pan and split shelf are interchangeable.

COLD STORAGE

A cold storage compartment in the "six" has a shallow moonstone cover, and the super-freezer door has been changed to conform with that of the 1939 Deluxe line. Unit and cabinet retain the features that are characteristic of the entire line, including stainless steel evaporator, Tel-a-Frost indicator, quick trays, all-steel construction, and exterior finish of glyptal on bonderized steel.

The Special line, consisting of a "four," a "six," and the large "eight," has a completely new exterior design.

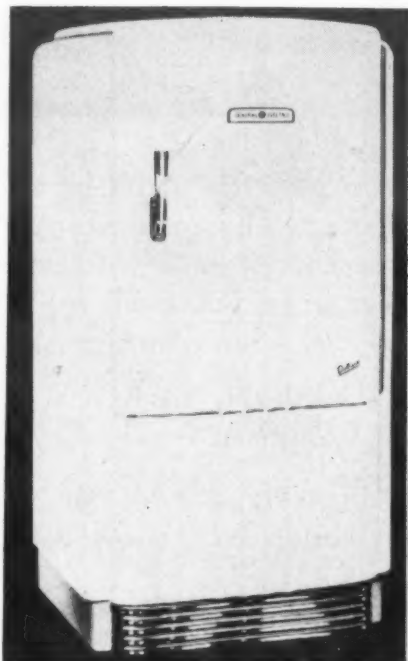


Filled with activated carbon, this flat, perforated aluminum container is designed to eliminate food odors.

The smallest model has an evaporator similar to that used in larger sizes. Quick trays, evaporator doors, and an automatic interior light are standard equipment.

The "four" is about 15% more efficient than the corresponding model of last year, claim G-E engineers. Unit and cabinet features are standard. The "eight" is an entirely new model designed primarily for rural customers and others who need more than the average storage space.

Class — and — Mass



At left is the exterior of the 8-cu. ft. "Deluxe" unit, one of the costlier models in the G-E line. At right is the interior of the 6-cu. ft. "Special," a box designed primarily as a "price leader" for volume sales.

Inside Information



Interior view of one of G-E's "Deluxe" models, showing T-rail shelving, Pyrex casserole with pie-plate tops, water bottle, and dish set.

Georgia Market Keeps Pace With Sales

ATLANTA—Here's Georgia Power Co.'s explanation of how the market for major electrical appliances in its territory has more than kept pace with sales in the last five years:

Company customers in residential districts numbered 120,000 in June, 1934. Now there are 177,000—57,000 more prospects for major appliances.

In 1934, 42,500 customers had electric refrigerators and 77,500 did not have them. Today 117,000 customers use electric refrigerators—but 60,000 customers do not.

There were 18,000 electric ranges in use in 1934, and 102,000 customers were without them. Now 41,000 ranges are in use, but 136,000 cus-

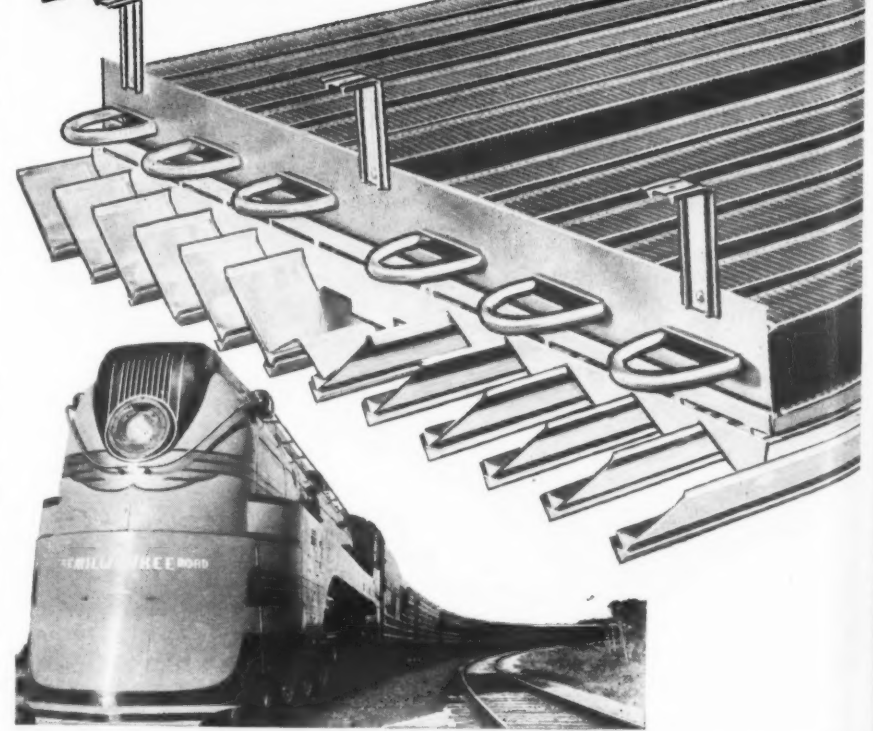
tomers still do not have them.

In June, 1934, 2,600 electric water heaters were in use in customers' homes; 117,400 customers were without them. At present, 19,500 water heaters are on the company's residential lines, but 157,500 customers do not use this type of equipment.

P. M. Atkins, Westinghouse Distributor, Dies

MONROE, La.—P. M. Atkins, 59-year-old president and founder of Monroe Hardware Co., Louisiana and Mississippi distributor of Westinghouse appliances, died recently at his home here. In addition to being head of the Monroe company, Mr. Atkins was head of a local bank, and a director of Louisiana Power & Light Co.

FAST COOLING MODERN DESIGN



PEERLESS FLASH COOLER

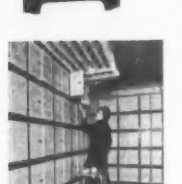
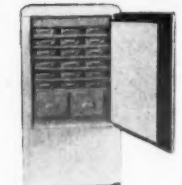
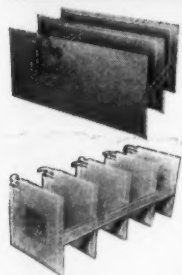
Stream-lined for efficiency and beauty. AIR MOVES FREELY over coil DESCENDING VERTICALLY from each row of coil . . . through individual drip pans. HIGH HUMIDITY COIL—MINIMUM food SHRINKAGE.

Rifling adds 30% to the efficiency . . . lower operating costs.

Ask your jobber for details or write for literature

PEERLESS of AMERICA, INC.

MIDWEST FACTORY, GENERAL OFFICES—515 W. 35TH STREET, CHICAGO
NEW YORK FACTORY PACIFIC COAST FACTORY SOUTHWEST FACTORY EXPORT DIVISION
43-20 34TH STREET 3000 SOUTH MAIN ST. 2218 N. HARWOOD ST. P. O. BOX 636
LONG ISLAND CITY LOS ANGELES, CALIF. DALLAS, TEXAS DETROIT, MICH.



Other Uses: Can be supplied for many other applications such as Bottle Coolers, Display Counters, Display Windows, Food Counters, Salad Pan Coolers, Milk Can Coolers, Etc. ALSO Refrigerating Accessories and Parts: Flexible Connections, Valves, and complete cabinet replacement parts.

Write for catalog for additional information
**DOLE REFRIGERATING
COMPANY**

5920-C N. Pulaski Road, Chicago, Ill.

Nov. Appliance Sales In Dallas Valued At \$278,084

DALLAS, Tex.—A total of 180 electric refrigerators were sold by appliance dealers here during November, bringing the 11-month total for 1939 to 7,422, according to reports to Dallas Power & Light Co. Six electric range sales were reported during the month, and the total for the 11 months was 36.

Radio sales during November reached 2,178 with a total of 20,927 for the first 11 months of the year. With one sale in water heaters during November, the total reported through November was seven.

Vacuum cleaner sales for the month were 648, fixing the 11-month figure at 5,336. Washers totaled 233 for November, and 2,931 for the year. Ironer sales for the month amounted to 18, with an 11-month total of 228. Seven dishwashers were sold in November, to bring the 11-month figure to 23.

Attic ventilating system sales by dealers in November totaled 18, bringing the 11-month total to 858. Two self-contained air-conditioning systems were sold during the month, to make the 11-month figure 59. Space heater sales were 124 for the month, and reached 1,037 for 11 months.

The estimated amount of sales of all electrical appliances for the month of November was \$278,084, and the 11-month estimate was \$3,668,586.

Westinghouse Ups All Appliance Advertising

MANSFIELD, Ohio—Westinghouse will increase its refrigerator magazine advertising expenditure by 50% in 1940 and its refrigerator national newspaper expenditure by 45%, reports Roger H. Bolin, advertising and sales promotion manager.

Range, roaster, and iron magazine expenditures also will be increased for 1940, and a year-around magazine advertising schedule on washers and ironers is planned, Mr. Bolin said.

Harold Rahn Appointed Dealer Contact Man For Niagara League

BUFFALO—As a step toward better understanding of merchandising problems and increasing the volume of business done, Harold G. Rahn has been appointed dealer contact man for the Electrical League of the Niagara Frontier.

In his new capacity, Mr. Rahn will keep in constant touch with dealer members of the league, study their problems, and assist in solving them whenever possible.

The new dealer contact man has had a broad background of experience in the appliance merchandising field, starting in 1917 as Buffalo district salesman for Frigidaire. In 1920 he became manager of the Buffalo Frigidaire branch, and in 1926 was named sales manager for E. B. Dunigan, Frigidaire distributor.

Since 1929, Mr. Rahn has been electric refrigerator and range sales supervisor for Buffalo Niagara Electric Co.



HAROLD G. RAHN

Several Changes In Distributor Set-Up Made By Hotpoint

CHICAGO — A number of new Hotpoint distributor appointments were announced this month by R. W. Turnbull, Hotpoint vice president and general sales manager.

The Graybar Electric Co., with offices and warehouse at 1010 Rockwell Ave., Cleveland, and their branch at 225 James St., Akron, Ohio, are new wholesale distributors for all Hotpoint appliances in that area. A. L. Perry is district manager for this Graybar office, and R. Tracewell is merchandising manager. Mr. Tracewell will have charge of the merchandising of Hotpoint appliances.

The Graybar Electric Co., Minneapolis, is new wholesale distributor of all Hotpoint appliances in the western half of Wisconsin, all of Minnesota, and North and South Dakota. E. C. Sharpe is district manager.

Fred T. Eggar, formerly branch manager of the Hotpoint distributing branch in Minneapolis, has been appointed merchandising manager in charge of Hotpoint appliance sales for the Graybar Co., Minneapolis.

Twenty-three Kentucky counties will be served by the Ferguson Co., Paducah, Ky., new wholesale distributor of all Hotpoint appliances in that locality. C. B. Ferguson is general manager, and R. H. Strickland is in charge of appliance sales.

John Moore, for the past three years Hotpoint refrigeration specialist for the Edison General Electric Appliance Co.'s Dallas, Tex. district, has been appointed appliance manager for the Stratton-Warren Hardware Co., new Hotpoint distributor in Memphis, Tenn.

Janesville Dealers 'Map' Out-of-Town Promotion

JANESVILLE, Wis.—To better acquaint individuals from surrounding towns as to their locations, a group of Janesville home appliance firms, in cooperation with the local newspaper, is making available without charge, a civic folder which includes a map and commercial guide of Janesville.

Platted on this map and listing their phone numbers are the following appliance firms: Wisconsin Electric Sales Co., Adams Appliance Co., Harris Stores, Krueger Hardware Co., Drake's Radio Sales & Service, and Econ-O-Col Stoker Sales.

The Janesville market area includes 42 towns in five counties comprising a population of 75,000, and local merchants participate to a considerable extent in an estimated annual farm sales income of more than \$23,000,000, it is said.

South Bend Appliance Sales Show 31% Increase In Nov.

SOUTH BEND, Ind.—Retail sales of household appliances in Indiana independent stores continued to show good volume during November, with reports indicating an increase of 31.1% during the month as compared to November, 1938.

Sales volume of household appliances led all major business classifications during November in percentage of increase over the same month of 1938.

Buffalo Distributorship Changes Its Name

BUFFALO — McCarthy Bros. & Ford, distributor of Westinghouse and RCA Victor products in western New York State, has changed its name to Buffalo Electric Co., Inc. Warehouse and display rooms will continue to be maintained at 75 W. Mohawk St., and there has been no change in ownership, management, or personnel.

New Westinghouse Dealer

BLACK MOUNTAIN, N. C.—Black Mountain Hardware Co., owned and operated by J. P. Ashley, has been named dealer here for the complete line of Westinghouse appliances.

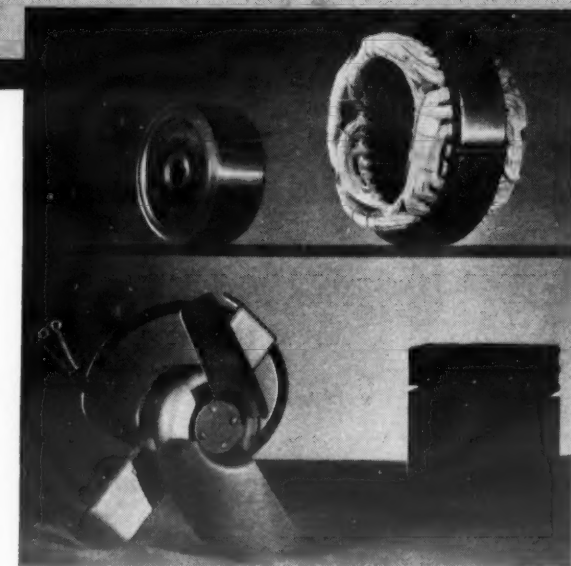


These men all were pictured as they talked over plans and products for the current year at the 1940 Kelvinator-Leonard sales convention held here recently. (1) William Miller (right), Leonard distributor in New Haven, Conn., spellbinds Charles T. Lawson (standing). Seated with Mr. Miller are A. A. Schneiderhahn (left) and S. W. Onthank of A. A. Schneiderhahn Co., Leonard distributor in Des Moines, Iowa. (2) R. C. Cameron (second from left), head of Kelvinator's major market and department store sales, converses seriously with (left to right) D. W. Jones and Roy Palmer of Duke Power Co., and George Wagoner of Kelvinator, from Charlotte, N. C. (3) Among easterners present were Keith Saunders (standing), zone manager, and Max (left) and Paul Krich of Krich Radisco Co., Newark distributorship. (4) J. Nelson Stuart, director of advertising and sales promotion, stops to chat with D. G. Ellis (left), engineer, and J. N. Eccelstone, wholesale man from the Buffalo zone.

The DELCO HERMETIC UNIT

Makes Your Refrigerator
a Better Value

Refrigerator
Manufacturers



friction and belt friction. The unit is compact, self-contained—requires no attention during the life of the refrigerator.

Manufacturing Methods Assure Freedom from Dirt Particles. Delco Hermetic Units are washed and dehydrated to give positive protection against service trouble that might be caused by the presence of foreign matter in the unit.

Engineered to Meet Adverse Conditions. Insulation of cotton or specially-processed paper enables Delco Hermetic Units to stand up under adverse conditions, such as splash or coolant vapor. Operation by hot wire relay or magnetic relay affords overload protection as well.

Rugged Construction Gives Long Life. Rugged construction assures the long life of Delco Products refrigerator units. Rotors are copper-welded—no solder is used which might introduce metal particles into the sealed unit. Like all Delco Products motors, Delco Hermetic Units are given dielectric and run-in tests before leaving the factory.

Delco Hermetic Units for household refrigerators are available in sizes from 1/8 to 1/2 h.p.—split phase, condenser start, condenser start and run. They provide long, trouble-free service and economical operation . . . can be housed in a small unit.

Eliminates Seal Friction and Belt Friction. An important factor in the efficiency and economy of the Delco Hermetic Unit for refrigerators is the elimination of seal

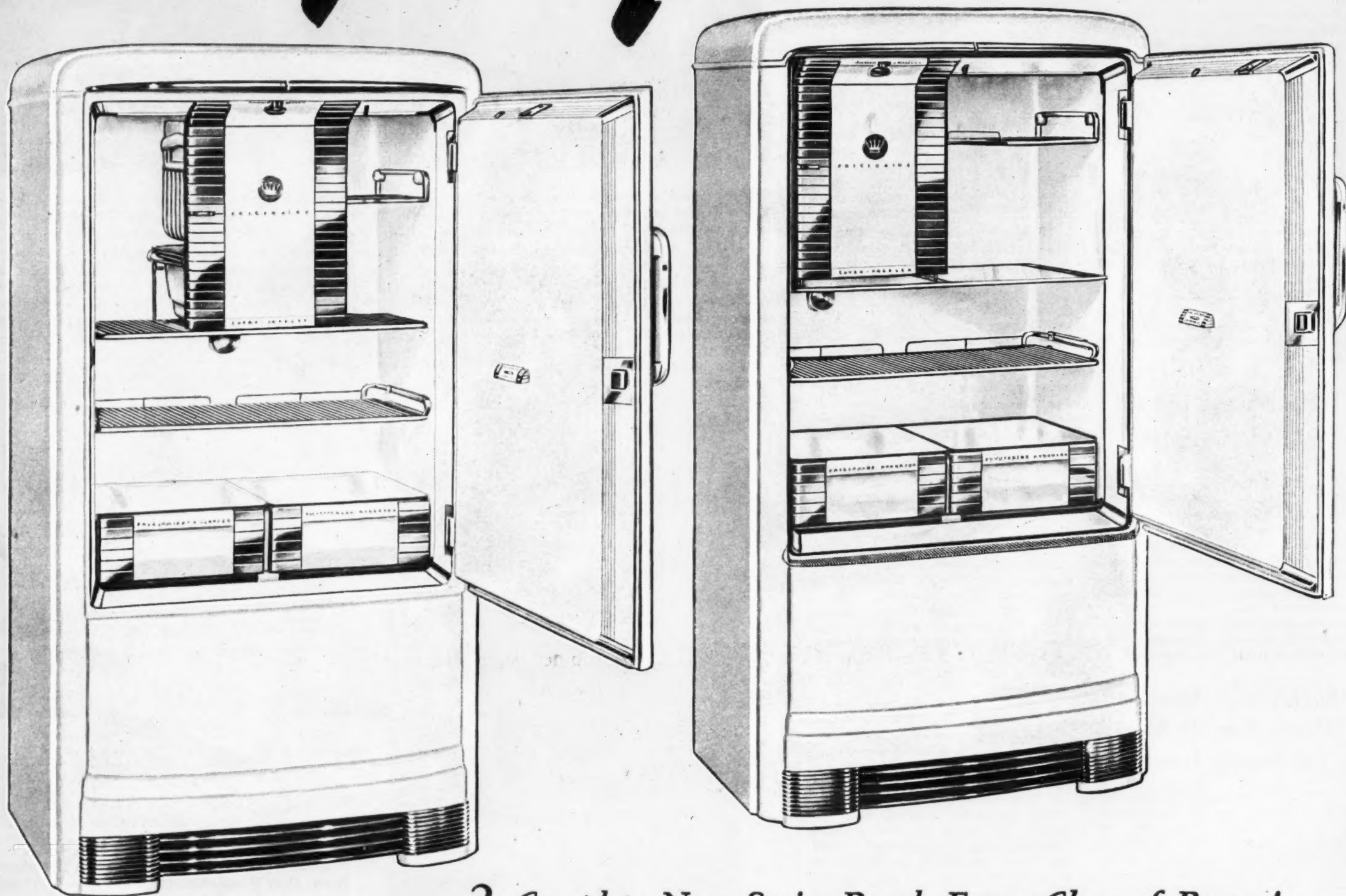
FOR ALL APPLIANCES

There Is a Delco Motor Designed to Do the Job

Every Delco Motor is designed specifically for the appliance which it powers. This is a factor that protects the manufacturer, the dealer and the appliance user—a factor that has influenced leading appliance manufacturers to specify Delco Motors for their products.

DELCO MOTORS
DIVISION OF GENERAL PRODUCTS
DAYTON, OHIO

It's Frigidaire



2 Complete New Series Reach Every Class of Buyer!

8 STANDARD MODELS

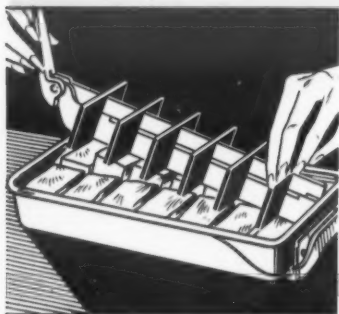
● Setting new high standards of value—with such de luxe features as stainless chromium shelves and Quickube Trays in every model, from highest to lowest in price. No other make refrigerator offers so many truly valuable selling advantages!

7 COLD-WALL MODELS

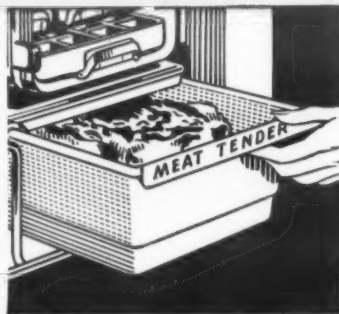
● The finest refrigerators money can buy. Newly improved. Offer at new low prices the revolutionary Cold-Wall Principle that's already been proved in the homes of thousands of enthusiastic owners.



FRIGIDAIRE IS A *Better Buy!*



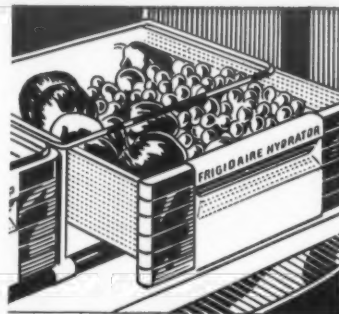
Double-Easy Quickube Trays come loose and cubes pop out instantly. No hacking, no melting under faucet. Greatest ice convenience ever offered—in every tray in every 1940 model.



Extra-Large Meat Tender slides out like a drawer. Saves food dollars every month by properly protecting all kinds of fresh meat and fowl. Also stores 100% extra supply of ice cubes.



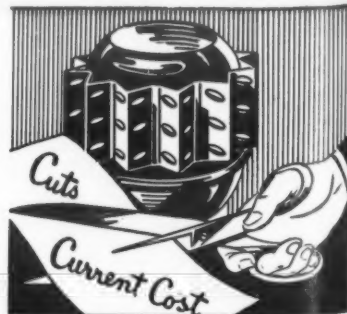
New Stainless Chromium Shelves dramatize the beauty of Frigidaire interiors with bright, mirror-smooth luster. Rustless and sanitary. Stay new for years. Cleaned in a jiffy. Another Frigidaire First!—In every 1940 model!



Glass-Topped Food Hydrators guard freshness of fruits, vegetables, other perishables so amazingly you can actually see dewy moisture on the glass covers. Preserve color, flavor, days longer.



One-Piece Steel Cabinet built to last a generation, seals in the insulation and prevents "water-logging" that destroys cold-keeping efficiency. Easiest of all cabinets to keep clean.



Meter-Miser...simplest cold-making mechanism ever built. Self-oiling, self-cooling. Silent, efficient—uses even less current than ever before. Exclusive F-114 Refrigerant, safest ever known.

for '40!



NEW Design and Color Harmony! NEW Convenience Features!
NEW Low Operating Cost!

America's No. 1 Refrigerator Leads Again!

• Does it have "that golden touch"? There isn't a single doubt!

It's big, it's beautiful, it's a bargain, this glamorous new Frigidaire. A stunning creation of master craftsmanship and engineering skill.

Eye-capturing is the cabinet exterior. Rich new beauty...clean, appealing design...definitely promise an abundance of buying advantages for the customer and a wealth of selling advantages for the Frigidaire selling man.

But wait—what a picture inside! An artist's genius come to life! An exquisite color harmony of bright blue, dazzling white and glittering gold! Shining stainless chromium shelves... a new, extra-large Meat-Tender... Glass-Topped Hydrators! A jewel-like interior of convenience that will delight every woman who sees it!

And the beauty and value are more than meet the eye. Deep in the heart of this sturdy, one-piece steel cabinet, is the Meter-Miser, further improved for 1940

...quietly and efficiently keeping food safer and freezing ice faster at *the lowest current cost in Frigidaire history!*

Yes, the new 1940 Frigidaire Refrigerator, backed with far reaching and thorough selling support of all kinds, is as "good as gold" in the pockets of Frigidaire selling men.

See the new 1940 Frigidaire Refrigerators and you'll believe what we've known for many months: "It's Frigidaire for '40!"

Sensation of the Industry — **New Frigidaire Electric Range**

Extra Fast! Extra Sure! Extra Thrifty!

• Nine brilliantly beautiful 1940 models include a new top-quality range equipped with two ovens...a new "double-duty" range, which is a combination electric range and kitchen heater...and a feature-packed low cost cabinet model.

Sells for \$129.75 In Most Cities

This new range, Model B-15, has twin-unit oven, 5-speed surface units, Thermizer well

cooker, and other high quality features found in ranges costing up to \$70 more!

New Features of 1940 Models

NEW SIMPLI-MATIC OVEN CONTROL provides super-fast pre-heating, then *automatically* switches to proper baking temperature without thought or attention.

THRIFT-O-MATIC SWITCH on the rear surface unit *automatically* turns from high to low heat when desired. Also a feature of the Thermizer well cooker.

NEW SIGNAL LIGHTS glow whenever any surface or oven heat is turned on.

A NEW COOKMASTER CONTROL, much simpler and easier to use.

A HANDSOME COOKING TOP LAMP, now a feature of every standard household model.

With its many selling advantages, with its sound, aggressive sales program, we say with confidence that the new 1940 Frigidaire Electric Range will exceed the sales and profit expectations of every Frigidaire selling man!



New 1940 **FRIGIDAIRE Electric** **WATER HEATERS**

The line now includes a handsome "Super-Value" model selling at the lowest price ever placed on a Frigidaire Electric Water Heater. Beautiful new De Luxe Cabinet models, and trim Table Top model (36" high) give Frigidaire Dealers a complete and profitable line of electric water heaters, meeting every customer need.

AIR CONDITIONING & REFRIGERATION NEWS

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Why Not Air Condition Your Own Store?

NOW that packaged air-conditioning equipment is so much improved, and so reduced in price, manufacturers of such equipment are more and more considering the successful specialty selling dealer as an outlet for their products.

They realize that if air conditioning is ever to become an industry, if it is ever to prove profitable to them, they'll have to get it on a mass-production basis. And to get line production under way, they need some assurance of volume selling. From their own experience with other products, they know that at this stage of the game volume selling is only possible through specialty selling methods.

Hence field representatives for manufacturers of packaged air-conditioning equipment will be out in their respective territories during the next two or three months giving specialty dealers the once-over. Some of the things they will look for before offering a franchise to dealers they consider qualified will be:

- (1) Proved selling ability on specialty items.
- (2) Financial stability.
- (3) Reputation in the community.
- (4) Appearance of store, especially with regard to effectiveness of display.
- (5) Interest in air conditioning, as evidenced by having installed a unit in their own stores.

Specialty Dealers Lag Behind Others

It's this last item which will disqualify most dealers from consideration—dealers who might otherwise have all the earmarks of good prospects for franchises. For, strangely enough, specialty dealers have been far behind other mercantile and service establishments in air conditioning their stores.

Drug stores? Yes. Jewelry stores? Indeed. Department stores? Notably. Men's furnishing stores? Yes again. Also, fur shops, restaurants, opticians, shoe stores, women's apparel stores, barber

shops, bars, funeral homes, hotels, candy stores, banks, and offices. All these classifications rank high in the purchase of air-conditioning equipment for the comfort of their patrons and for the stepping-up of their summer trade.

But specialty product stores have not caught up with the parade. There are, of course, some notable exceptions. From our own files we can produce the following outstandingly successful specialty retailers who have testified as to improved business following the installation of air-conditioning equipment in their stores and showrooms:

Howard Baker Co., Toledo; Boot & Co., Grand Rapids; Rosenblatt & Hunt, Charleston, W. Va.; Geo. Koch & Sons, Evansville, Ind.; Times Appliance, New York City; Mechanical Heat & Cold, Detroit; Sears & Piou, St. Louis; M. G. Lehman, Lincoln, Neb.; Shelley Electric, Wichita, Kan.; Mack Electric Co., St. Louis; Householder Electric, Carrollton, Ohio; Home Products Co., Glendale, Calif.; Reseda Hardware Co., Van Nuys, Calif.; Manchester Electric Co., Manchester, Conn.; A. P. Woodson Co., Washington, D. C.; Leon Electric Supply Co., Tallahassee, Fla.; S. C. Hard, Pittsburgh; and Modern Appliance Co., Hattiesburg, Miss.

Manufacturers Will Be 'Choosy' In 1940

These are the kind of stores that air-conditioning manufacturers are seeking as outlets for their products. And it should be noted that acquiring an air-conditioning franchise this year will not be easy—not nearly so easy as it has been in past years. Manufacturers have lost too much money on dealers who have abandoned the business after making a few weak passes at it. They want someone who will stay in the business, and who will really promote it. And this means, above all, someone who will install it in his own store, so that he will become fully sold on it himself, and so that he can demonstrate it properly.

However, the specialty dealer should not consider the installation of air conditioning in his store primarily from the standpoint of its making him more acceptable as an air-conditioning dealer—desirable though a good franchise is beginning to seem. He should consider air conditioning his own store first of all because it will pay him, in dollars and cents.

They Found That It Pays To Be Cool

Here are some of the reasons why other retailers have found that it pays to install air conditioning:

- (1) To attract new customers. Not only will a new clientele be brought into the store through the prospect of comfortable shopping, but they will deem the proprietor of the store an up-to-date, successful merchant who should be able to give them the newest merchandise and the best service.
- (2) To hold old customers. Add to reasons above, the pride old customers will feel in the improvement made in the store they have been patronizing—they will feel that they helped make it possible.
- (3) To increase sales per customer. Shoppers linger longer, buy more, are inclined to stick around for demonstrations of "big ticket" goods, and are more easily pleased.

They'll Do It Every Time . . . By Jimmie Hatlo



(4) To make employees happier and more efficient. Numerous case study records are available to prove this point. Among other things, lost time due to illness is reduced, customers are more cheerfully and intelligently served, and possible labor troubles are avoided.

(5) To get the jump on competitors. First dealership in the community to install air conditioning always get credit for being most progressive, in addition to attracting trade by providing comfort.

(6) To keep merchandise clean and new. An air-conditioned store is a clean store, and merchandise kept therein is always cleaner and more saleable.

(7) To reduce cleaning costs. Decorations, walls, ceilings, floor, and window displays all stay cleaner and more effective; and the necessity for frequent "house cleaning" is avoided.

(8) To offset poor locations. In the case of those stores which "got there too late" when the best locations were being handed out, air conditioning will cause people to go out of their way to shop in comfort.

Records Prove That Sales Will Increase

It's not guesswork when you try to estimate your possible increase in sales volume after the installation of air conditioning these days. Experience of other retailers can give you an excellent idea. The accompanying tables have been prepared by the Frigid-aire division of General Motors Corp. from careful records compiled by a number of sources.

What kind of air conditioning should you install? The best you can afford. But if you are going to sell packaged air conditioning,

Average Increase In Volume After Installing Air Conditioning

Classification of Businesses	Aver. Annual Increase in Volume from Air Conditioning	Source of Information
Barber Shops	25.00%	Utility Companies Reports
Beauty Shops	33.30%	Banker's Monthly
Department Stores	9.90%	Retail Ledger
Drug Stores	7.12%	Chain Store Age
Restaurants	36.06%	Amer. Restaurant Mag.
Jewelry Stores	6.60%	Signed Testimonials
Men's Furnishings	10.00%	Retail Ledger, Men's Wear, and N. Y. Edison Co.
Shoe Stores	7.30%	Retail Ledger, Chain Store Age
Women's Apparel	15.30%	Retail Ledger and N. Y. Edison Co.
Average of all	16.67%	

Analysis of Average \$50,000 Business

Annual Gross Volume	\$50,000
Increase After Air Conditioning—16.67% Average	8,335
Gross Profit on Increase (37.48% average)	3,124
Yearly Owning and Operating Cost (20.7% average on a \$1,750 system based on 10-year amortization)	364
Amount of Business Increase Necessary to Pay Owning and Operating Cost \$364 plus 37.48%	972
Gross Profit on Increased Business Less Owning and Operating Cost (\$3,124 minus \$972)	2,152
Subtract 10% for Increased Overhead	—215
NET PROFIT INCREASE AFTER AIR CONDITIONING	\$ 1,937
Average Net Profit Before Air Conditioning (5.5% of \$50,000)	\$ 2,750
Total Net Profit After Air Conditioning	4,687
Increase in Net Profits After Air Conditioning	68%

you probably will want to install a packaged air-conditioning unit. Price of such an installation is much lower than that of a central system, anyway.

Don't let anybody sell you too large a unit for your store. People want relief, not winter temperatures. A 10° differential between outside and inside temperatures is usually sufficient. The old fallacy that it should be "72° inside" has frozen more people out of the notion of favoring air conditioning than perhaps any other factor.

If your store is in a small town, you may find it more economical to operate an air-conditioning unit than your brother in the metropolis. You are more apt to have cold water (which enables you to get along with a smaller compressor) and your water and electricity costs are apt to be less.

Original equipment costs have been drastically reduced. And now is the time to buy—before the spring selling season gets under way.

LETTERS

Cleaner Dishes In Prospect For Westerly, R. I.

9 R. R. Ave.
Westerly, R. I.

Editor:

Can you send me the names and addresses of a few different manufacturers of electric dishwashing machines. I would like to carry these machines to sell.

SAMUEL GINGERELLA

Answer: Following make this equipment:

Conover Co.
122 S. Michigan Ave., Chicago, Ill.
General Electric Co., Bridgeport, Conn.
Vidrio Products Corp.
3920 Calumet Ave., Chicago, Ill.
Westinghouse Electric & Mfg. Co.
Mansfield, Ohio

Style Suits Him

Lawrence, Mass.

Sirs:

Will you please extend my subscription to the News for another six months.

Also, send a copy of manual LS-1 on "Refrigerated Locker Storage." Although I cannot judge the value of the paper to the trade because I am not in it yet, I will say the editing and the literary style of the paper are entirely satisfactory.

Enclosed is payment.

AUGUSTINE J. SALVETTI

Emphasis Placed on User Conveniences In Frigidaire Ranges

DAYTON, Ohio—More convenience for the user, plus a wider choice of models with new beauty, feature the 1940 Frigidaire electric range line.

Frigidaire's 1940 line of electric water heaters this year is enlarged by the addition of three new models, designed primarily for installation where low price is a predominating factor. All operating features of the three new water heaters are the same as those in the standard Frigidaire units.

One of the new ranges added to the 1940 Frigidaire line is a deluxe model incorporating two complete ovens. Another is a new specially designed, low priced standard base model which, it is stated, has a zone 2 suggested retail selling price of \$129.75, yet at the same time includes basic Frigidaire electric range features. Including two combination ranges, there now are 10 models in the Frigidaire electric range line.

Both service features and appointments on all models have been improved and refined to bring about increased usefulness and beauty, it is claimed. A new design has been developed for the top of the "Thermizer," built-in cooker. Handle on the top is newly designed in keeping with style innovations in 1940 models, and is located at the side of the Thermizer cover rather than in the center. The Thermizer is a part of every range except the combination and apartment house models.

Also, this year every standard and deluxe household model is equipped with a lamp which previously has been included only with a portion of the line.

Extent to which user convenience has been considered is symbolized, in part, by the provision of six signal lights on the B-70 model, the new deluxe model introduced this year. Operating status of either of the twin ovens or surface units is "telegraphed" to the user through the use of lights which indicate whether the heating units are turned on. Signal lights also are used on other models.

Designed to meet a demand for a range with twin ovens, the B-70 has several features designed to simplify all cooking operations. Baking capacity is enlarged by the addition of the second oven immediately below the surface heating units. This oven has two heating units, of 2,700 watt and 2,000 watt capacity respectively, which are identical with those in the standard oven, and in common with it has the "Evenizer" heat distributor, rust-proof oven lining, oven heat control, non-tilt sliding shelves, three-position oven door, and other conveniences. Both ovens may be utilized as broilers, making it possible to prepare a larger quantity of broiled foods at one time, or to broil and bake simultaneously.

As another addition to easier cooking, "Thrifty-Matic" cooking has been introduced in the B-70 both to the deep well Thermizer cooking and the back surface heating unit. The Thrifty-Matic control permits the user to set the switch at "high" for any period up to 30 minutes, with heat automatically turned to "low" at the moment indicated. This automatic feature formerly was used only in connection with the deep well cooker, so this is its first use in conjunction with a surface heating unit. Five-heat speed-heat units that provide accurate adjustments of temperature for every type of cooking are used in the two front units on the cooking top.

An innovation to the entire Frigidaire deluxe line of electric ranges this year is a "Cook-Master" time control of different design than the

Frigidaire 'Cooks Up' Something New



Twin ovens are a feature of the new Frigidaire range. Except for a difference in height the ovens are exactly alike, each with two heating units, broiler, one-piece porcelain liner, and hydraulic thermostat control.



"At home on the range" is the title which the Frigidaire publicity department gives this picture of the new Frigidaire range, which has as principal features five-heat cooking units, one-piece porcelain top, new automatic time control, and hydraulic thermostat.

type previously used. The new time control, which can be set to turn the oven on and off while the user is away from the kitchen, consists of a clock and two concentric rings which are adjusted for commencement and ending of cooking time.

An inner ring is set to the hour when cooking is to begin; the other ring, on the outside of the first, is then turned so that it measures the required cooking period. This arrangement, it is believed, will eliminate any confusion which might arise when various dials must be adjusted to provide this automatic form of cooking.

An additional new feature is the "Simpli-Matic" single-dial oven control, which eliminates the need for manual adjustment from pre-heat to baking temperature. With this control, pre-heat automatically is reduced to baking heat when pre-heat temperature is reached.

The new low priced B-15 electric range added to the Frigidaire line this year includes the same basic construction and service features found in other Frigidaire ranges. This range has black and chrome hardware in place of the white and chrome type found on other ranges in the line. The B-15 has five-heat speed heat units, and a Thermizer cooker with manual control. It has a full-size oven equipped with twin heating units, as well as standard insulation, one-piece stainless cooking top, armored wiring, hydraulic thermostat, non-tilt sliding shelves, silver contact switches, and other advantages of the regular line. A lamp also is included as standard equipment.

All units in the line, with the exception of the L-10 leg model, are of the base type. Each model has a one-piece steel cabinet with full porcelain finish. Lamps, control panel, and hardware also are improved.

The Frigidaire electric range line now consists of three deluxe models, the B-70, B-60, and B-40; three standard models, the B-30, B-20, and L-10; two combination models, the BC-5 and BC-6, intended primarily for kitchens requiring a range that supplies heat as well as cooking facilities; one apartment house model, the A-6, and the B-15.

*This is the Coat of Arms of
GEORGE WASHINGTON
The Symbol of a Man Who
Proved that HONESTY
IS THE BEST POLICY*



*This Is The Symbol of
UNIVERSAL COOLER CORPORATION
Who Continue to Practice TRUTH IN BUSINESS*

Ours is a tremendous responsibility in furnishing our clients with condensing units. We must assure a standard of quality entirely acceptable to our customers, their distributors and the ultimate users. And because we have satisfactorily upheld our responsibility we now enjoy a general and wide acceptance throughout the industry. Manufacturers are invited to write for complete information!

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Have You Seen . . .

1. New 28 Series Full Vision Case

2. Leader 24 Series Case

3. Air-Conditioned 25 and 26 Series Cases

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5. New Ice Maker Coil Cabinets

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CHICAGO

LOS ANGELES

Seeger

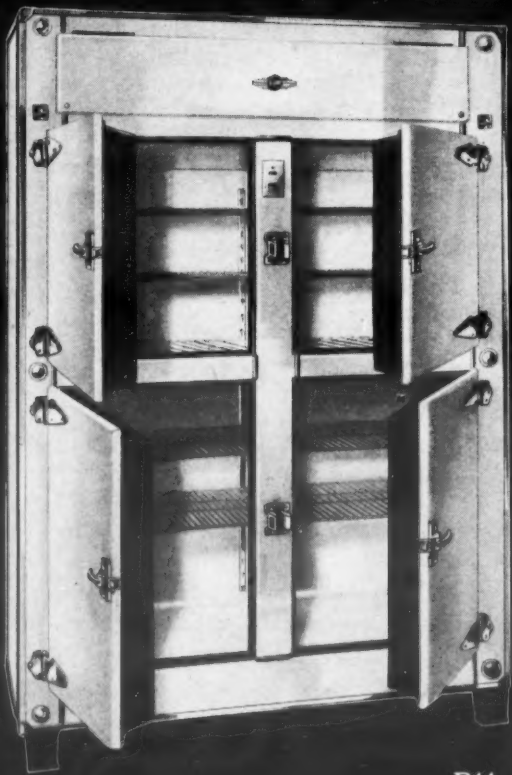
"Old Reliable"
All-Porcelain, Finned Coil
Equipped.

Seeger

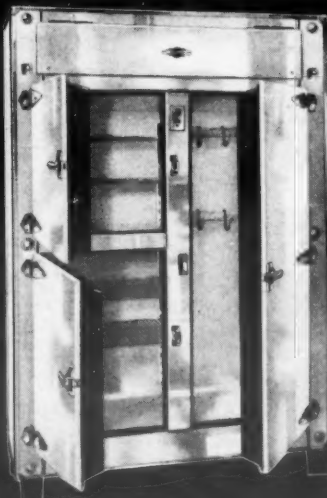
New Air Conditioned
Cabinets,
New Styles - New Features.



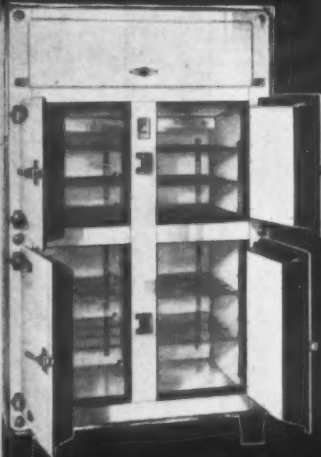
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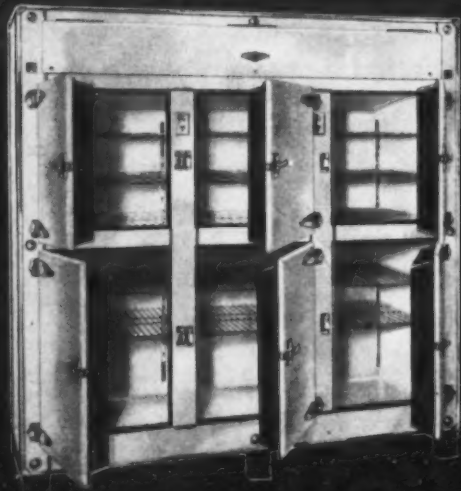
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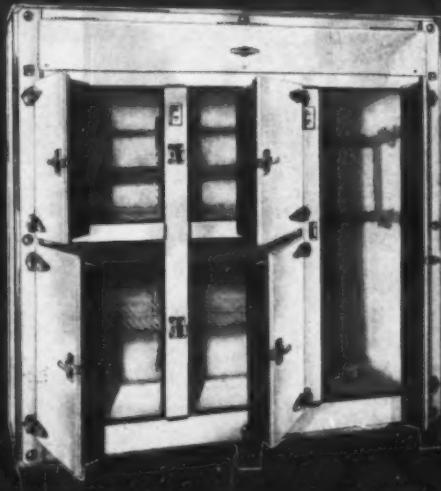
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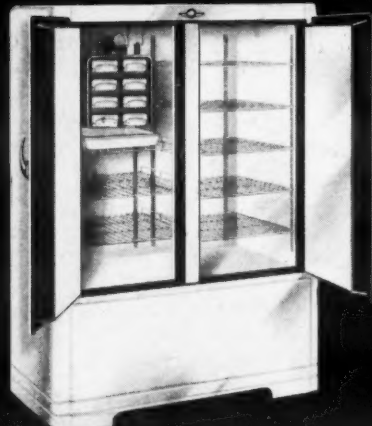
P27



P68



P681



P23



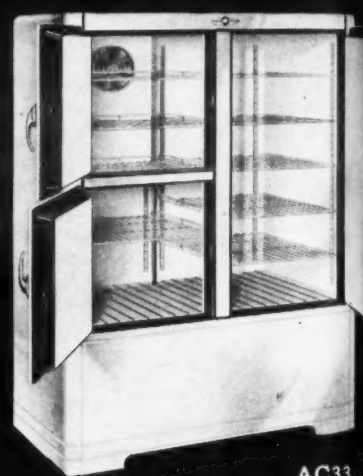
AC41GG



AC41



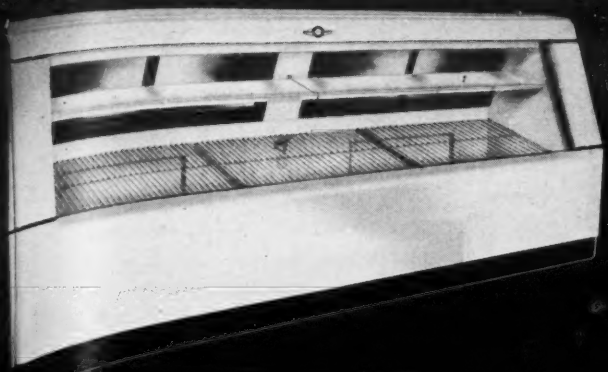
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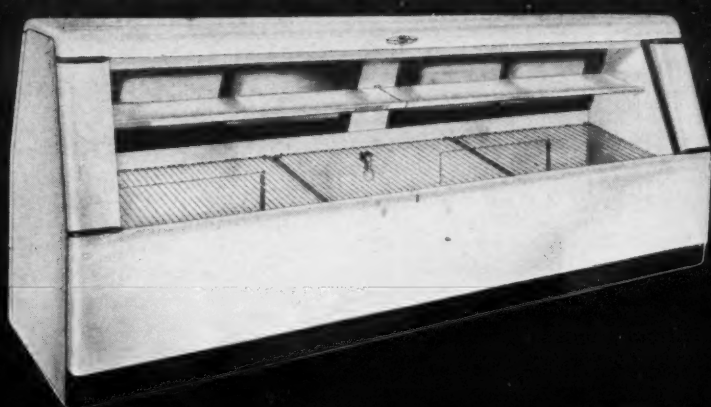
AC33

Seeger

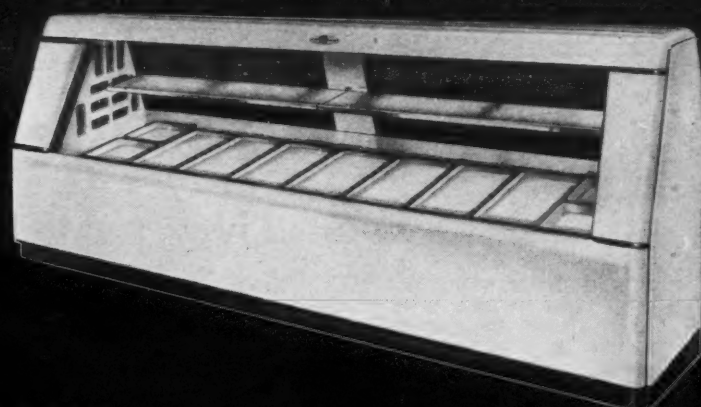
Display Cases,
Single and Double Duty,
Air Conditioned or
Finned Coil Equipped



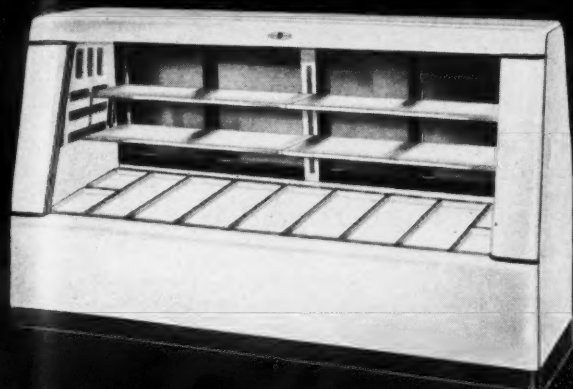
Series SC24



Series 24



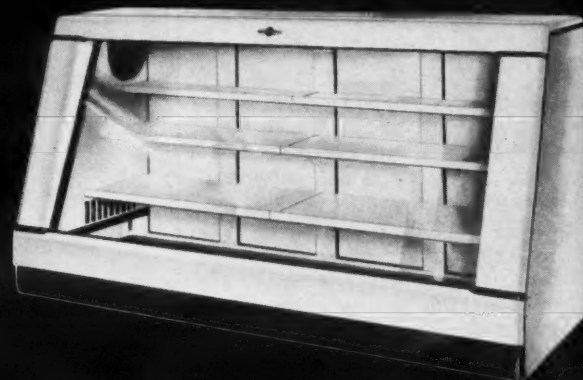
Series 25



Series 26



Series 27



Series 28



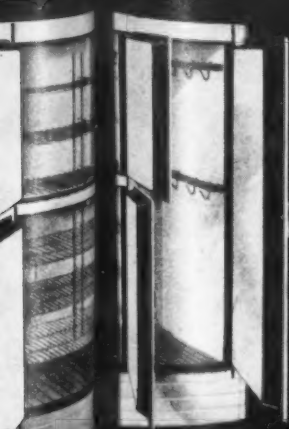
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AC41



AC411

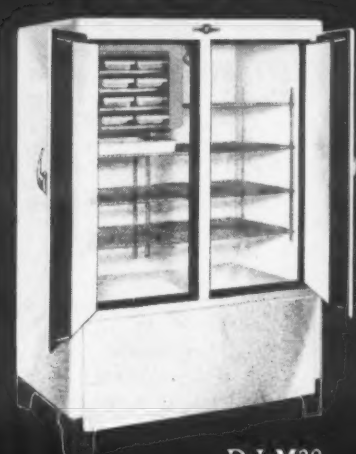
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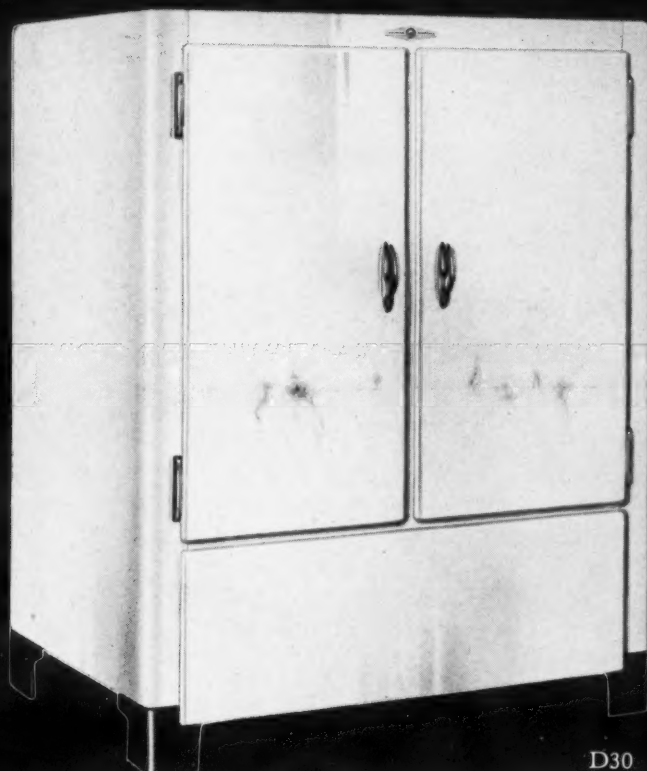
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D20



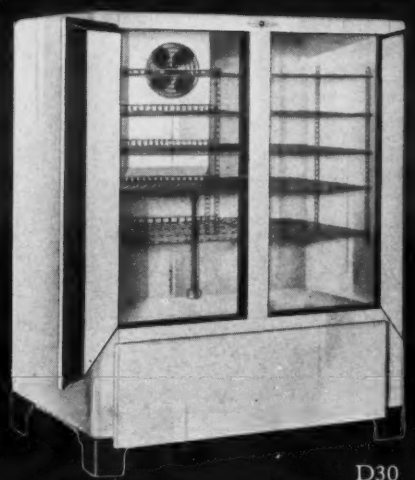
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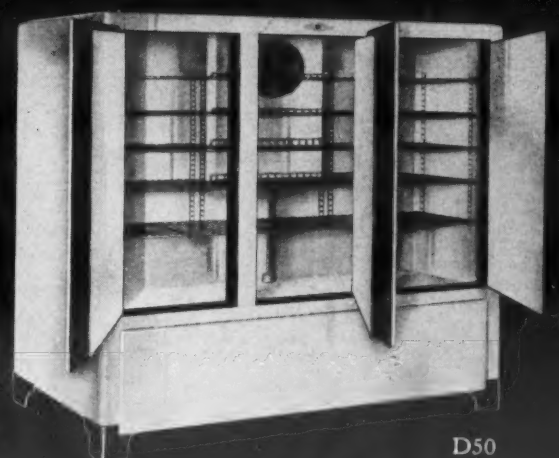
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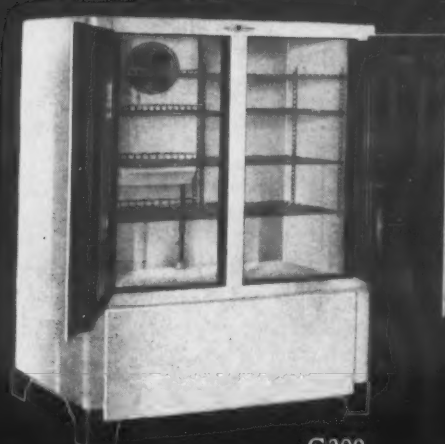
D-I-M30



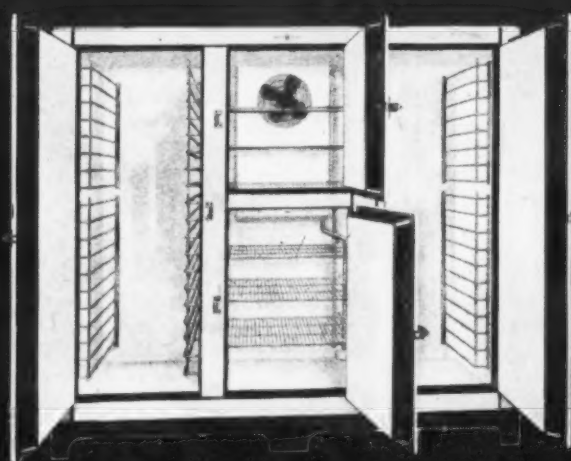
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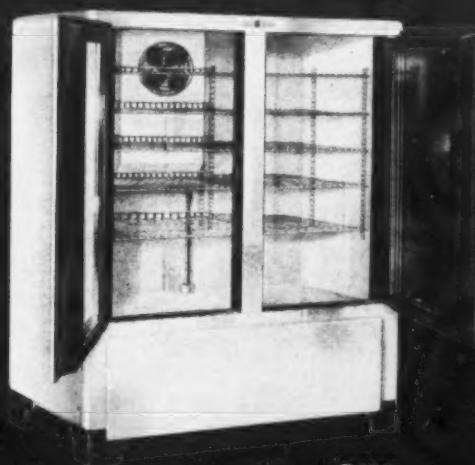
D50



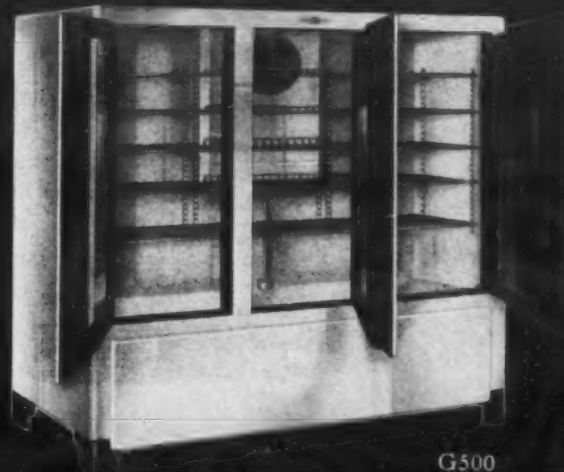
G200



B6420



G300



G500

PERSONALITIES

By George F. Taubeneck

Cartooned

Last week, in connection with the special issue of Air Conditioning & Refrigeration News devoted to the All-Industry Exhibition in Chicago, the News published a flock of cartoons of leading refrigeration industry figures. Some of these cartoons appeared on the "Personalities" page, along with quick-written sketches of the leaders thus caricatured.

This week we have three more for you, along with sketches of some of the men who were cartooned last week.

Irv Knudsen

The entire industry rejoiced when Irv fought his way back from a long illness this year. Slimmer and trimmer, but just as jovial and entertaining as always, he is now back in the thick of the industry.

As sales manager of refrigeration products for Detroit Lubricator, Irv has been in the industry since the time when it wasn't an industry. He was peddling his valves around when there were only a handful of manufacturers in the game, and he rode the crest of the wave right on through the industry's great development of the last decade.

Few men have had more fun, made more money, or acquired more friends

through refrigeration than Irv Knudsen. Can we say anything nicer about a man than that?

J. C. Battles



Almost any time you see J. C. (Chet) Battles, Midwest Mfg. Co. sales manager down in Galesburg, he's carrying blueprints of a new

addition to the Midwest plant. In three short years at Galesburg, Chet and his brother, S. S. Battles, have built the Midwest operation into one of the finest in the industry.

Besides showing an apt hand at keeping the boys in the field in line, Chet is an accomplished journalist. His chief extra-curricular activity is turning out the monthly Midwest Cabinet Builder—"a house organ with a personality."

A good deal of Chet's interest in the company's bowling leagues, baseball teams, marriages, births, et al. is reflected in the monthly issues of the Cabinet Builder. It's all part of his well-thought-out employee relations program.

Bob Luscombe



Bob Luscombe, Penn Electric Switch sales manager, radiates activity. Whether it be in his bright office at the beautiful Goshen plant or somewhere far afield, it's almost impossible to find him when he's not up to his neck in strenuous activity—always bustling.

Six years with Penn have placed him in close contact with most of the country's manufacturers and jobbers and when he isn't mixing with them himself, he's directing the activities of his 14 contact lieutenants with dynamic force.

After hours, Bob is a camera enthusiast of the first water. His dark room, equipped with all the fixin's, brings envy to visitor's eyes.

Deane Perham



Deane Perham of the Chicago Master Steamfitters Association is a refrigeration pioneer from 'way back. He started with the old Automatic Refrigerating Co. of Hartford, Conn. in the year 1908, and followed through with that company's early attempts at building unitary systems suitable for small commercial and large household installations.

He has been in the refrigeration industry continuously ever since, and has as wide and varied an acquaintanceship in the industry as any man can boast.

Activities of the American Society of Refrigerating Engineers have long held his interest, and he can usually be found at all the national meetings. He is also the guiding spirit of the Chicago section of the A.S.R.E.

Frank Gleason

Over in Buffalo one night after an R.S.E.S. convention, Frank Gleason was sitting in a poker game which included the writer, Phil Redeker, Bill Higham of Universal Cooler, Joe Krall of Detroit Lubricator, and one or two others.

Things went along smoothly for a couple of hours, with Frank the major winner. Along about that time he began to feel ill. Not wishing to "quit winners," he found someone to take his hand and his stake while he lay down to rest.

An hour or so later Frank felt better, got up, and rejoined the game. While he had been asleep, his "dummy" had increased Frank's stake by some 40 or 50 dollars!

That's a pretty fair picture of Frank Gleason and the ways things seem to come to him. He moves through life easily and smoothly, and people like him so well they do things for him, send business his way.

Also, his habit of always thinking 'way ahead—of crossing bridges before he comes to them—enables him to anticipate difficulties and be ready with the proper remedies when they arrive.

As Copeland's vice president in charge of sales, Frank is one of the most familiar—and most welcome—figures in the entire refrigeration industry.

Hal Clay

If there's any doubt in your mind as to what part of the British Isles raw-boned, big-framed Hal Clay's ancestors hailed from, one look at his plaid necktie will dispel your question.

Hal thrives on his able sales-managership of Dole Refrigerating Co.'s many activities. No swivel-chair executive, he. It's not unusual to find Hal attending five conventions and meetings in various parts of the country in as many days.

One thing in particular we envy this fellow is his ability to relax. Naturally nervous and tense, Hal can sit down in the midst of utter confusion, sprawl completely over and around a chair for a couple of minutes, and be ready to go again with vim and vigor.

He's a straight-shooter, and as fearless as he is direct and honest.

Bill Keefe

When Big Bill Keefe joined the Fedders organization 16 or 17 years ago, he started out in the sales manager's office.

Today, Bill is still in that office—but one important difference is that now he sits behind the big desk while at the beginning he sat in front of the desk with a shorthand notebook on his knee.

Friendly and unassuming, Bill just doesn't seem to get ruffled about any undue importance of things or people. Usually found with his hat perched 'way at the back of his head, he handles his important post with admirable placidity.

That's probably why most people seem to like him just as much as we do.

J. W. Hatch

It was right after the World War that Jim Hatch joined up with the Bush Mfg. Co. (By World War, we mean the World War. Personally, we think Time magazine is to be criticized for calling this present European what-is-it World War II. It isn't a world war, and it's bad psychology to call it one.)

The connection stuck, and today Mr. Hatch stands at the top of the heap as president of the company. In the year since Jim and his sidekick, Ed. Flannery, obtained control of Bush, really remarkable strides have been made. If we know these gents at all, the fireworks have just begun.

Those of you who, like us, get a kick out of the antics of Penguin Pete in the Bush advertising will be interested in knowing the origin of this personable bird.

It all started, so we're told, when Bush coils were used in the refrigeration equipment aboard one of the supply ships in an early Byrd antarctic trip. If our memory serves us right, those coils also helped to cool the cargo of penguins during the torrid equatorial portion of the return trip.

W. A. Hammond

Antioch College, with its unique combination of a work-and-study student program, is a fitting background for the enterprises of shrewd, scholarly Professor W. A. Hammond.

Back in 1934, having uncovered and developed the peculiar properties of Drierite (anhydrous calcium sulfate to you), the Professor set up a laboratory for its commercial production right at the college.

Hiring half a dozen Antioch students to work under him, he set about finding markets for this new drying agent, meanwhile continuing his lectures and activities at the college.

A new and substantial brick building now houses the growing Hammond business, and the refrigeration industry is only one of many in which Drierite is used.

College students, however, still comprise the employment list, and W. A. still continues his regular work as associate professor of chemistry at Antioch.

L. H. D. Baker

Another gent whom Oxford opticals grace is Lee Baker, long known in the industry through his Copeland and Universal Cooler affiliations, and now sales manager of Gale Products.

Tall, rather thin and very distinguished, Lee cuts an impressive figure which belies the utter humanness of this man. He's a grand, easy conversationalist and a rapid thinker. His record in directing sales of Gale refrigerators, space coolers, and Jomoco compressors, and condensing units is impressive.

In view of Lee's keen appreciation of the problems confronting the refrigeration dealer, the new Gale "Kit Plan" comes as no surprise to us. We think he's really got something there, too.

C. H. Benson

One man who can tell you the origin of the term "Leatherneck" right quick is friendly Charley Benson, Imperial Brass Advertising Manager. During America's Participation, he was one of the U. S. Marine brethren, and ran around in khaki or broadcloth as the occasion demanded.

A prodigious worker, Charley is also one of those lads whose duties extend to many industries and many things. Each of Imperial's lines in the plumbing, automotive, refrigeration and other fields requires separate advertising, displays, exhibits, etc., and all fall within Charley's domain.

It's no wonder he likes to travel, and goes on vacations far, far away each year.

B. G. Wiley

Maybe it was his background in the Marines which gave B. G. Wiley, All-Steel-Equip Company's "pint of dynamite," his flair for oratory.

Blaine (or "B. G." as you prefer) is one of those witty life-of-the-party fellows who can hold an audience open-mouthed with spellbindery. Out in Des Moines at the locker industry's conflag last month, his rendition of "The Shooting of Dan McGrew" made such a hit that he was placed on the banquet program along with professionals—and brought the house down.

During working hours he and Al Schoeberlein aggressively supervise the far-flung sales of All-Steel's food storage lockers.

R. R. Dunlop

R. R. Dunlop, Secretary of Ranco and one of its founders, is as good a convention-goer as we know.

During the long grinds that begin at the crack of dawn and end in the not-so-small hours, he is present at nearly every function. Bright and early the next day he'll be on hand, looking as chipper and ready as ever. Never yet have we been able to precede him at the beginning of a new day—he's always there first, garishly dressed in one of the many sporty suits he reserves for such occasions.

It makes us wonder, sometimes, if Ranco doesn't have one section of its eye catching plant devoted to producing vitamin pills.

BUNDY TUBING

... The strength of steel
plus workable ductility

BUNDY TUBING CO.
DETROIT

Revised G-E Cooling Sales Plan Aims At Closer Contacts With Field

(Concluded from Page 1, Column 4) has corresponding duties for all eastern states.

Under these dual managers are four zone managers, two for each half of the country. A. E. Pierce, formerly in charge of the company's automatic heating sales section, supervises the northeast zone, which includes metropolitan New York, eastern Pennsylvania, New Jersey, Connecticut, Rhode Island, Massachusetts, New Hampshire, and Maine. E. B. McClelland, formerly assistant to Mr. Hulett, becomes manager of the other eastern zone, including upstate New York, central Pennsylvania, Delaware, Maryland, the District of Columbia, the Virginias and Carolinas, Georgia, and Florida.

In the western half of the country, C. M. Rowland, who for several years has been in charge of G-E packaged commercial refrigeration sales, becomes zone manager for Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, the Dakotas, Iowa, and eastern Missouri. L. A. Hobson, previously district office manager at Atlanta, supervises operations in the other western zone, including the Rocky Mountain and Pacific states. All zone managers will have their

quota of district managers to supervise.

Working with the resident district managers and zone managers throughout the country will be newly appointed specialists in oil-fired equipment, gas equipment, packaged cooling, packaged commercial refrigeration, remote refrigeration, national users, and code applications. These men will be available in any district needing their services.

Engineering, design, and service activities are coordinated in the new engineering division in Bloomfield, under the managership of H. D. Kelsey, former head of design engineering. D. W. McLenehan and W. O. Lum have been named consulting engineers, while R. U. Berry relinquishes his duties as Dallas office manager to become Mr. Kelsey's aide in charge of field engineering.

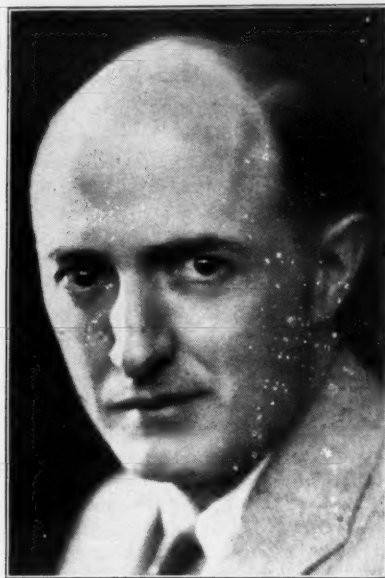
Glenn Gundell, manager of advertising and sales promotion, maintains his present duties, including supervision of the G-E air conditioning and commercial refrigeration institute, with added responsibilities due to the expanded sales program. W. R. Wennerstrom remains in charge of manufacturing, while J. E. Kusik becomes manager of finances.

Direct G-E Merchandising Under New Plan



HAROLD T. HULETT

Under General Electric's revamped sales set-up on heating, cooling, and commercial refrigeration equipment, Mr. Hulett will direct sales in the eastern half of the United States, Mr. Harrington in the western half.



ELLIOTT HARRINGTON

1,404 Cooling Systems Sold In New York In 11 Months

NEW YORK CITY—Installations of air-conditioning equipment in the New York City area during the first 11 months of 1939 totaled 1,404 jobs, according to statistics compiled by Consolidated Edison Co. This is an addition of 623 jobs since the October report, and includes jobs installed earlier in the year but unreported.

Residential installations total 165 on the basis of the current report, and 235 private office installations, 204 retail stores, and 201 restaurants also are other high classifications for the year's first 11 months.

Residential	165
Banks	5
Barber-Beauty Shops	7
Broadcasting Studios	2
Clubs	6
Hospital Wards	2
Operating Rooms	2
Hotel Guest Rooms	6
Public Rooms	20
Office Buildings	38
Doctors' Offices	235
Offices, Miscellaneous	1
Lecture Hall	201
Restaurants	54
Showrooms	17
Department Stores	204
Retail Stores	20
Theaters	9
Other Commercial	11
Bowling Alley	1
World's Fair	51
Drug Manufacturing	3
Laboratories	2
Storage	4
Candy Manufacturing	4
Bakeries	2
Other Industrial	12
Miscellaneous	316

S. E. Lauer Advanced To York Presidency; Shipley Named Chairman of Board

(Concluded from Page 1, Column 4) association with the York organization covers a period of approximately 30 years.

During the summers, while attending college, he worked in the drafting department of the York Mfg. Co. When he finished college he started regular work with the concern. He worked in the shop and on the road erecting machinery for the company for several years, then joined the research and testing laboratories of the company, and finally entered the sales department.

In 1918 Mr. Lauer went to the St. Louis office of the company as sales manager. He left St. Louis in 1923 to become Pacific coast manager, remaining in the west until the merger of the York Mfg. Co., its independent branches, and other corporations into the York Ice Machinery Corp. in 1927. At this time he came east as assistant to Thomas Shipley, president of the corporation, serving in that capacity until Mr. Shipley's death.

In 1930, William S. Shipley was elected president of the corporation, and Mr. Lauer was made general sales manager. A few years later, he was elected vice president in charge of sales.

The new executive vice president, Mr. Kleinschmitt, has also had a long career with the York organization. He is a native of Missouri and began his business career with National Enameling & Stamping Co.

In 1911 he became associated with

the Pilsbry-Becker Engineering & Supply Co., York outlet in St. Louis. In 1920 Mr. Kleinschmitt helped organize the York Products Corp., a merger of the Pilsbry-Becker company and five other companies. Upon the formation of York Ice Machinery Corp. in 1927, he was elected secretary and general assistant treasurer of the new corporation. In 1934 he was elected vice president in charge of finance.

Mr. Williams, new vice president in charge of engineering, has been in the York organization for 25 years. Born in Australia and graduated from the City of London Technical Institute, he joined the British Linde Co. in 1899, specializing in marine refrigeration, and became manager of the American Linde Refrigerating Co. in New York City.

Mr. Williams joined United Fruit Co. in 1904, and while with this company he developed a number of methods for refrigerating fruits.

He remained with United Fruit Co. until 1915, when he joined the Shipley Construction & Supply Co., York outlet in Brooklyn. Mr. Williams here assisted in the design and construction of marine (carbon dioxide and ammonia) refrigerating equipment for commercial and naval service.

When York Ice Machinery Corp. was formed, Mr. Williams was brought to York as engineer-in-chief, retaining this position until his present promotion.

'Selective Control' Feature of Cincinnati's First Conditioned Apartment House

CINCINNATI—First complete air-conditioning system to be installed in an apartment house here has been designed by the Bimel Co., Frigidaire distributor, for the "Inapla" seven-family building. The system has what Henry W. Moore, air-conditioning engineer for the distributor, calls a "selective control" system. The equipment is designed to cool the living room and dining room, or the two bedrooms, of each apartment at one time.

According to Mr. Moore, a system of this type can be installed in an apartment building at a price which permits the owners to operate and maintain the system at a cost of about \$10 per month. It is not unreasonable to require the tenants to absorb this increase in rents for the use of air-conditioned quarters, he declares.

Each apartment is equipped with an individual air-conditioning unit which has selective finger-tip control. This unit is a concealed suspended one-ton Frigidaire direct expansion conditioner. Air capacity of the fan

is 400 c.f.m. There is an extra unit for the penthouse, located on top of the building.

Containers of the air conditioners are made of hard pressed ground fibre which is fire resistant. After many tests this particular material was found to be more adaptable for this purpose than a metal box, because it prevents vibration and noise.

The individual conditioners are used in multiple with a remote condensing unit in the basement. This is a 7½-hp. Frigidaire compressor, having a capacity of eight tons per 24 hours. A sub-cooler economizer is installed in the basement to improve efficiency in the system. Freon is carried to the individual conditioners by a system of copper piping. "Air-Maze" all-steel permanent washable filters are used in each conditioning unit.

Ducts which carry conditioned air to rooms on the third floor and the penthouse are all thoroughly insulated.

The Inapla apartment is owned by P. J. Zimpelmann.

By the way,
have you seen the
expansion valves that
the industry has been
waiting for?

—DETROIT'S NEW
GAS CHARGED DURA-FRAM
EXPANSION VALVES
(SINGLE DIAPHRAGM CONSTRUCTION)

BOOTHS 88 and 89—CHICAGO

DETROIT LUBRICATOR COMPANY
Canadian Representatives
RAILWAY & ENGINEERING
SPECIALTIES LIMITED
DETROIT, MICHIGAN

Small 'Back Room' Type of Locker Plant Operation Termed Economically Sound

DETROIT — Small refrigerated locker storage plants averaging from 150 to 200 lockers have proved economically sound in communities of from 400 to 5,000 people, according to E. L. Mohr of Mohr & Harvey, manufacturers' agents for the Dole Refrigerating Co. and Master Refrigerated Locker Systems, Inc., speaking on the merchandising of locker plant equipment before the Detroit section of A.S.R.E.

Mr. Mohr was introduced by Louis S. Morse, Jr. vice chairman of the local section.

James O. Harvey, refrigeration engineer who was formerly associated with Dole before joining Mr. Mohr, discussed locker plant construction and problems encountered in quick freezing of meats and food products.

Citing his experience in Illinois, Minnesota, North and South Dakota, Nebraska, and Iowa, Mr. Mohr recounted the phenomenal growth of the locker storage industry. Where Iowa had six plants five years ago, Mr. Mohr said, the state now boasts more than 500.

TRACES GROWTH

Growth of the locker storage industry has been based on the economic value of locker service to the individual family, according to Mr. Mohr, who says the use of refrigerated lockers costs the average family absolutely nothing and those who do not patronize the plants where they are available lose from \$50 to \$100 per year.

Mr. Mohr stated that he had been associated with the sale of 650 locker plants in the middle west, and that in Iowa the saturation point was being rapidly reached. At a recent convention of locker operators in Des Moines, it was learned that only 140 towns of 100 population or over in the state of Iowa do not have locker plants at the present time.

Outlining his belief that the locker plant business belongs to the food merchandiser, Mr. Mohr cited an example of a grocery store in Parker, S. D. that had picked up 135 new customers since the locker plant had been installed in connection with the store. Locker plants bring trade to towns where they are located, and food merchants should install them to keep their trade and get this additional business, the speaker asserted.

Grocery stores and meat markets installing small "back-room" locker plants costing from \$3,000 to \$4,000

can make three or four thousand dollars a year in addition to increasing the over-all business, Mr. Mohr said.

Surveys have revealed that the average locker renter uses 800 lbs. of meat and produce per year. At 1 cent per lb. for processing, the plant operator derives \$8 revenue from this source, to which is added \$10 yearly rental—a total of \$18 per locker. On a 200-locker plant, this is a revenue of \$3,600 per year.

Success of the locker storage business is based on the fact that the farmer does not like to sell a hog "on the hoof" for 4½ cents per lb. and buy it back from the meat retailer for 25 cents per lb. a few weeks later. Another basic reason for the success of these ventures is the fact that many fruits and vegetables can be processed and stored when they are very cheap—at the height of the season—and used during periods when they are relatively expensive in the markets.

SELLING METHODS

Relating his own experience in the sale of locker plant equipment, Mr. Mohr said that from Aug. 1, 1939 to Jan. 1, 1940 he had sold 36 plants, ranging from \$2,800 to \$3,400 in price, at gross profits ranging from \$700 to \$1,000. Financing of these deals is based on 25% down and the balance carried at 5% for three years, either by one of the finance companies or on FHA bank paper.

Relating the methods used to sell these plants, Mr. Mohr said that it was his custom to approach a food or meat merchant in a small town and ask him this question: "Why not put in a locker storage plant?" The usual answer to this approach was that the prospect said, "No money."

Mr. Mohr then explained to the prospect that no money or capital was necessary, if the locker plant idea was properly "sold" to the community. To do this "selling," Mr. Mohr started by running a full-page advertisement in the local newspaper over the prospect's name, stating that he, the prospect, was ready and willing to install refrigerated locker equipment if there was enough public demand.

NO CAPITAL REQUIRED

It was then necessary for the prospect, or future operator, to go out and rent lockers in advance, getting checks for one year's rental, with the understanding that the checks were not to be cashed until the day that the plant opened. By calling on every farmer within 10 miles of the town the prospect was able to rent perhaps 100 lockers in advance and collect \$1,000. Part of this fund made up the down payment on the plant, and the balance accrued to the future owner as working capital.

From Mr. Mohr's experience it developed that approximately 20,000 lbs. of meat would be processed during the first two weeks the plant was open, giving the owner an additional revenue of \$200 at 1 cent per lb. If the owner had \$200 out of the first \$1,000 collected, and an additional \$200 from meat processing, he would reach the end of the first two weeks in business with the down payment on this locker plant paid and \$400 in the bank—an enviable situation.

Mr. Mohr related that he had never yet found a community where a locker plant could not be started, once the fundamental idea had been put across to the people of the community. Because the average family made a real saving, they soon realized that the idea was fundamentally sound.

The speaker stated that in selling locker plants in small communities it

was advisable to hold down the size of the plant to from 150 to 200 lockers. The reason given for this was that the owner would not have to hire additional help to process meats, and would not have to build a building or make any additions to his present building. It has been found that a 150-locker "back-room" operation in a grocery or meat market is a much sounder operation than an independent locker plant requiring its own building and a full staff of salaried help.

PROFIT STORY

Mr. Mohr gave the following example of the profits that could be expected in this type of small locker plant:

100 lockers at \$10 per year rental	\$1,000
Processing of 80,000 lbs. of meat	800
Profit on sales (3 cents on 20,000 lbs.)	600
Total	\$2,400
Against this would be figured operating costs:	
Power costs at \$25 per month (average)	300
Paper, containers, and string	100
Total	\$400
Gross Profit	\$2,000

These estimates, of course, are predicated on the assumption that the food merchant does not have to hire any additional help or add to his present building.

Mr. Mohr has made a practice of selling "standard plants" which fit in the average 25-ft. building. They are sold complete, with all necessary alterations, insulation, refrigerating equipment, lockers, and everything else that it is necessary to make the plant ready for business.

According to Mr. Mohr, 200 lockers can be operated in a room 15 ft. x 15 ft. and processing done in chill room 7 ft. x 12 ft. He recommended that the "freezer room" be a steel cabinet within the locker room itself.

Explaining the use of Dole vacuum plates in locker storage work, James O. Harvey, who is now associated with Mr. Mohr, stated that any refrigerant could be used with this system—ammonia, methyl, SO₂, or Freon.

Tracing the history of locker plant development, Mr. Harvey said that original locker plants had wooden lockers and that "quick freeze" was anything under 24 hours. The slow freezing process brought on many difficulties, including bone-sour and the growth of enzymes in certain vegetables, particularly peas and beans.

This condition was improved, Mr. Harvey said, by the use of plates, which made an 8 to 12-hour freeze possible, when the plates were held at minus 10° F. This was twice as fast as the old method of freezing.

STOPPING 'FREEZER BURN'

Mr. Harvey asserted that what is commonly called "freezer burn"—encountered in quick freezing work—was simply dehydration caused by the passage of cold air over the product being frozen. Because of this condition, Dole Co. went to a semi-airtight design in building locker room freezers and recommended a semi-airtight locker, which reduced the circulation of air.

Later a "reach-in" type of freezer was developed, which had virtually no circulation of air, but it was still found that the product would "leak" when it was defrosted.

This "leaking" was found to be the result of a slow freeze. According to Mr. Harvey, water would separate from the fiber and other juices in meat during the freezing process, and when it was thawed, the water would

of course thaw first. The problem, then, was to freeze the juices or solution found in meats at the temperature at which the solution freezes—which is lower than the freezing temperature of water.

This was accomplished in the Dole reach-in type freezer cabinets by (1) reducing the temperature of the cold plates, and (2) placing the plates close together so that packages of meat inserted in the cabinet would be frozen from the top and bottom at the same time. Plates were placed 3-in., 4-in., 5-in., and 6-in. apart, to accommodate packages of various sizes.

Still another problem to be met was the difficulty encountered when meats frozen on plates from minus 35° F. and minus 50° F. were transferred to a locker storage room held at zero. This would mean a rise of about 40° F. when the transfer was made, and did not give the correct result. Packages left in the cabinet would often reach —50° F. before they were taken out, especially when left in the freezer over week-ends.

Knowing that the freezing (to zero) with minus 35° F. plates could be done in from three to five hours, Mr. Harvey worked out a control which would stop the flow of refrigerant to the plates when this point was reached.

This control consists of a sharp chromium plated thermal bulb which is connected to a thermostatic switch by means of a capillary tube. This "needle point" bulb is inserted in a piece of meat of average size, and when the center of the meat reaches a pre-determined point, 0° F. for example, the thermostatic switch

either actuates the pilot on the master relay or operates a solenoid valve in the suction line, stopping the flow of refrigerant to the plates. The system is controlled in this manner—from the center of a piece of frozen meat—until the meat is removed from the freezer.

In this way it is possible to freeze the products at extremely low temperatures but never let the product itself get below zero, so that no change takes place when it is transferred to the customer's locker for storage, Mr. Harvey declared.

Dole freezer cabinets are now built in 5, 6, 7, and 10-ft. lengths, equipped with plates one foot shorter. The cabinets have one door, except the 10-ft. cabinet, which is equipped with two doors.

To determine the amount of freezer shelf area necessary, Mr. Harvey computes on the basis of 2 lbs. of meat per locker per day, and on the basis of 7 lbs. per sq. ft. of plate area per freezing. On this basis, a 200-locker plant must handle 400 lbs. of meat per day. Divided by seven, it would require 57 sq. ft., and as the plates have approximately 7 sq. ft. it would require an eight-plate cabinet.

Mr. Harvey recommended that a locker storage plant have at least a 3-hp. air-cooled compressor, as peak loads encountered at certain seasons of the year made it inadvisable to install refrigeration equipment below this size.

The talks were illustrated by moving pictures of locker storage plant operations, and a general discussion followed the meeting.

National Locker Group's 'Growing Pains' Are Detailed By Its Secretary

DES MOINES, Iowa—In the wake of the first national meeting of locker plant owners and operators here last December and the formation of the National Frozen Food Locker Association, comes news of the initial efforts to weld this organization into an active and effective trade group.

Albert Guggedahl, secretary of the association, has established headquarters at Hotel Fort Des Moines. Invitations for the 1940 meeting, he reports, have been received from Des Moines; Sioux Falls, S. D.; Omaha, Neb.; Davenport, Iowa; and Peoria, Ill.

Mr. Guggedahl is urging present state associations to keep intact and is promoting the formation of similar groups in states where there is at present no association.

Members of state associations, he says, may achieve representation in the national association in two ways—by membership, and by appointing

a member to the national group's advisory board of directors.

This advisory board has not yet been completed, and the association is seeking nominations from state groups in Iowa, Nebraska, Illinois, Michigan, and Texas.

Present members of the advisory board include: D. R. Card, Minnesota; A. D. Hatten, Missouri; Ernest Huscher, Kansas; D. W. Sutherland, S. Dakota; Paul Kirk, Washington; B. F. Barnard, Indiana; H. L. Titus, Colorado; S. M. Vieth, Wisconsin; Claude Weaver, Ohio; J. C. Vidd, Ontario, Canada.

The stenographic transcript of the national meeting, covering all convention speeches, business sessions, the new association's constitution and by-laws, list of locker plant operators in attendance classified by states, and list of exhibitors, is available at a cost of \$2. Mr. Guggedahl has announced.

Changing From Cooling 'Renter' To Owner Saves Missouri Club \$8,000 Per Year

ST. LOUIS—That a properly installed and properly operated private refrigeration plant can save its owner plenty of money is the thesis upheld by the Missouri Athletic Club's statement that savings of over \$8,000 per year have been effected through installation and use of its own refrigeration system.

The completed plant has a total cooling capacity of 450 tons. It was installed by Kupferle-Hicks Co., heating and air-conditioning contractor here, to replace a former system by which ammonia at 40 to 45° F. was supplied through pipe lines by a commercial firm on a metered monthly-charge basis. The new plant was designed by John D. Falvey, consulting engineer.

The club's conditioning system was installed over a five-year period without disturbing occupancy of any of the public areas. All work was done at night, midafternoon, or other times when the club was little used.

The new plant, housed in a 36 x 40-foot basement room, furnishes

cooling for both air conditioning and refrigeration, including the kitchens and ice-making machines. Thirteen floors with 20 public rooms are conditioned.

Four vertical, single-acting Frick compressors which comprise the plant are connected to three-phase, 60-cycle synchronous motors totaling 456 tons, with a maximum capacity of 550 tons.

Two of the compressors are designed primarily for conditioning, with a third as an auxiliary. The fourth is to handle the low-temperature load in operating refrigerators and ice-making equipment. The two larger compressors are driven by 225-hp. motors, the smaller units by a 175-hp. and a 75-hp. motor.

A cooling tower on the roof of the building is 20 feet high and 45 feet long. It is divided into three sections to permit variable use. Cooling capacity is 2,000 g.p.m. Tower sections are equipped with American Blower fans, each of which is rated at 75,000 c.f.m.

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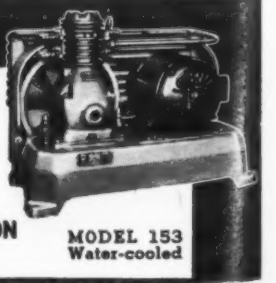
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GENERAL REFRIGERATION CORPORATION
Dept. AC-3 Beloit, Wis., U. S. A.



MODEL 153
Water-cooled

Vault-Like Beer Cooling System Sold With Profit To User on \$1-a-Day Plan

By Robert M. Price

WILKES-BARRE, Pa. — Selling beer-cooling systems on a \$1-a-day meter plan, and guaranteeing savings of \$2 a keg to bar owners, produces an average of four sales a week for the Popky Freezer Co., commercial refrigeration and air-conditioning firm here.

The beer-cooling system, called the "Air-Flow," was designed by this company, and employs a vault pre-cooler, with lines running to the beer dispenser. The cold storage vault is built with 4 inches of insulation, and is large enough to keep the kegs on tap, as well as several reserve kegs. Case beer and food may also be stored in the vault, which is kept at from 36 to 38° F.

INSULATED FLUES

A system of insulated flues is run from the cold storage vault to the dispenser, through which cold air is circulated. The small beer lines run directly from the supply kegs to the spigots through this cold flue. The system is refrigerated by York equipment. No coils, tanks, or water are used, it is said.

The system is sold complete with vault, dispenser, refrigerating equipment, and all accessories. The big selling feature of the system is the guaranteed savings.

If a customer buys the system on the meter plan, he pays so much a month, depending on the system installed and the contract agreed upon. Payments range down to the minimum of \$1 a day. Prospects are located through an intensive direct-mail system. These sales promotion pieces are designed to tell the whole story, and include a full diagram and explanation of the system.

SELLING BY MAIL

Features of the system are outlined carefully, the price installed is quoted, and the full list of equipment used gets a strong story over to the prospect. On this mailing piece is attached a return card that indicates the prospect's interest. A

salesman, making the follow-up, finds the prospect fully acquainted with the features of the beer-cooling system and the price and plan for payment. This mailing campaign makes the work of a salesman easier and produces prospects who are more than lukewarm, it is claimed.

Because the direct mail appeal is so important to this firm's business, care is taken in its makeup. Harry Popky, firm member, makes up the copy and layout. One piece is done black on white on one side. This side tells of the features of the system in one, two, three order. On the reverse side is carried testimonials from users of the system. Cartoons put a punch in the savings message.

LEADS FROM USERS

As the majority of the coolers are sold on the meter plan, salesmen call on users for payments. On these trips they make a checkup of the system to make sure it is working right. But the big gain from these regular calls are leads for new business from these users. This regular canvass keeps the salesmen right on top of new business, as tavern owners very often know in advance if new equipment is to be installed in other taverns, Mr. Popky explained.

Seven salesmen work a territory of 50 to 75 miles radius, following leads turned in by users, and calling on prospects turned up by the mail campaign.

GUARANTEE SAVINGS

Each system installed, Mr. Popky said, must have all equipment checked, and the refrigerating unit must be chosen so that full-load capacity can be maintained. Because the company sells the systems with a guarantee of savings on each keg of beer, care must be taken to have each part of the system up to full specifications. The systems are then regularly serviced to keep the user satisfied to the point of recommending the Popky cooler where it counts the most—to prospects.

Charge For Service Work At Time of Sale, Plus Bonus For Collections, Results In a Profit

OMAHA, Neb.—How much free service should be given with an electrical appliance sale? This question is answered by Storz Supply Corp. of this city with the statement: "Our service department must not only pay its own way, but show a profit of 6%."

The department carrying the service charges is known as the Storz Supply Service Department, and is managed and operated just the same as the departments selling tangible property. Ralph Dunne is manager, and E. N. Hughes, service manager.

"There is an investment in the department, and this company does not believe in carrying any merchandise, even though it may be in the form of service, that does not show a profit," Mr. Dunne said in explaining the policy. All Norge appliances handled by Storz Supply are included in this service department. The service charge is included in the sales price, and collected as a part of the payment.

In that way, there is a continuous income from the service department. Merchandise is guaranteed free service for 12 months, and, in some particular instances, for an additional three months.

CHARGE ADDED IN

But it isn't free so far as Storz Supply is concerned, as the service charge is added to the selling price of the appliance and collected at the same time the regular payment is made. So important is this service that the factory carries a school of instruction, and all dealers are given the benefit of the school.

Mr. Hughes has a master file that covers 13,000 owners of electrical appliances. That file, mounted on a revolving rack, is the index to a second file containing the full history of the transaction. This shows the article bought, when purchased, amount of service charge, how much of that charge is still due the service department, and also indicates the

reason for any extension of the service charge.

This record is so complete that it even carries notes as to who in the family made the selection, the day of delivery, and whether the man or the lady of the home O.K.'d the purchase.

Installation charges are included in the sales price. The company insists that every piece of equipment it sells must be installed by an expert. This greatly lessens the need for future service, adding that much more to the profit showing of the service department.

PERSONNEL QUALIFICATIONS

"What kind of men make good in this service work?" Mr. Hughes was asked.

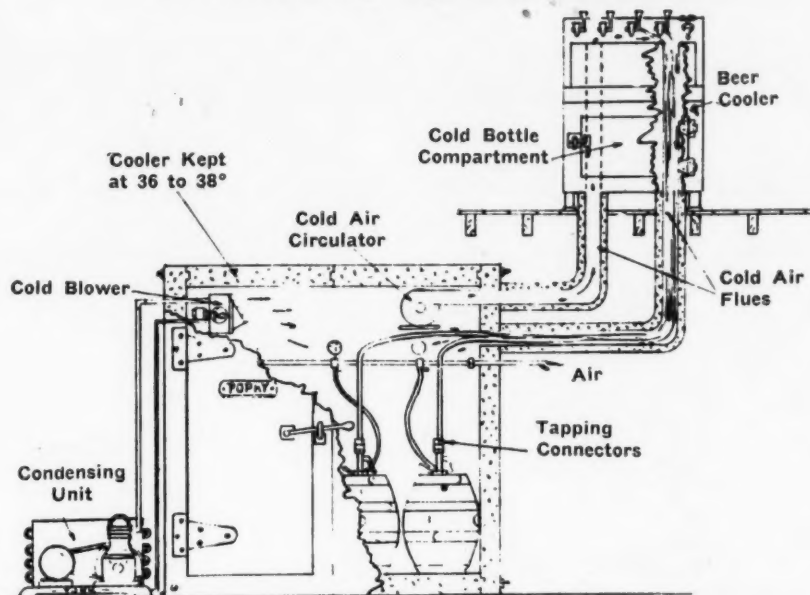
"A man must be of good habits, clean personally, have at least a high school education, be mechanically inclined, and willing to take a service course at the factory at the expense of the corporation," he replied. "Not only all that, but he should show a willingness to obey orders intelligently at all times."

This company believes a service department should be all its name implies. All calls for service are completed the same day as received. Each man in the field carries some of the parts oftenest needed, and so is not required to return to the store after each call. He reports to the service manager as soon as any service job is completed, and then is given any new assignments that have come in since his last report. This all means saving of time, and time is the stock in trade of the service department.

The man in the field is also told whether or not these new calls are paid or collect. The field man collects at the time for such service, unless advised otherwise by the service manager. To encourage this collection, the field man gets a 5% bonus for settlement at the time the work is done.

Mr. Hughes believes that the de-

Beer Cooling By Ductwork



Cutaway drawing showing how the forced-draft cooling unit, auxiliary air circulator, and cold flues operate to cool beer in the Popky system.

partment's largest single item of profit comes from its insistence that all appliances be expertly installed. Next in importance, he says, is to have the field men all good mechanics and good salesmen as well. The repair guarantee is for 90 days only; and the service man must be enough of a salesman to show his customer why this is true.

A few of Mr. Hughes' specifications for suitable service men are: "Don't talk too much"—"Forget your competitor"—"Keep all promises"—"Work intelligently"—"Do your work right"—"Be polite at all times."

TVA Purchases Mississippi Power Co. Properties

GULFPORT, Miss. — Tennessee Valley Authority has closed a contract for the purchase of the northeast Mississippi electric utility properties of Mississippi Power Co. Representatives of the utility, a Commonwealth & Southern subsidiary, the TVA, and cooperating municipalities and electric cooperatives met in New York City to close the \$2,000,000 deal.

Portable Electric Shear 'Nibbles' Sheet Metal

CHICAGO—A small, portable electric shear for cutting all kinds of sheet metal has just been introduced by the Independent Pneumatic Tool Co. Only 9 inches long and weighing but 3-3/4 lbs., it is a compact tool with yoke type front head incorporating a punch and die that "nibbles" out a rectangular shaving of metal at each upward stroke of the punch. The "Nibbler" will cut up to No. 18 gauge in steel and up to No. 15 gauge in aluminum.

Internal cuts of any shape may be made without breaking-in from the edge of the stock, simply by drilling or punching a hole one inch in diameter and inserting the head of the tool in this hole, it is claimed.

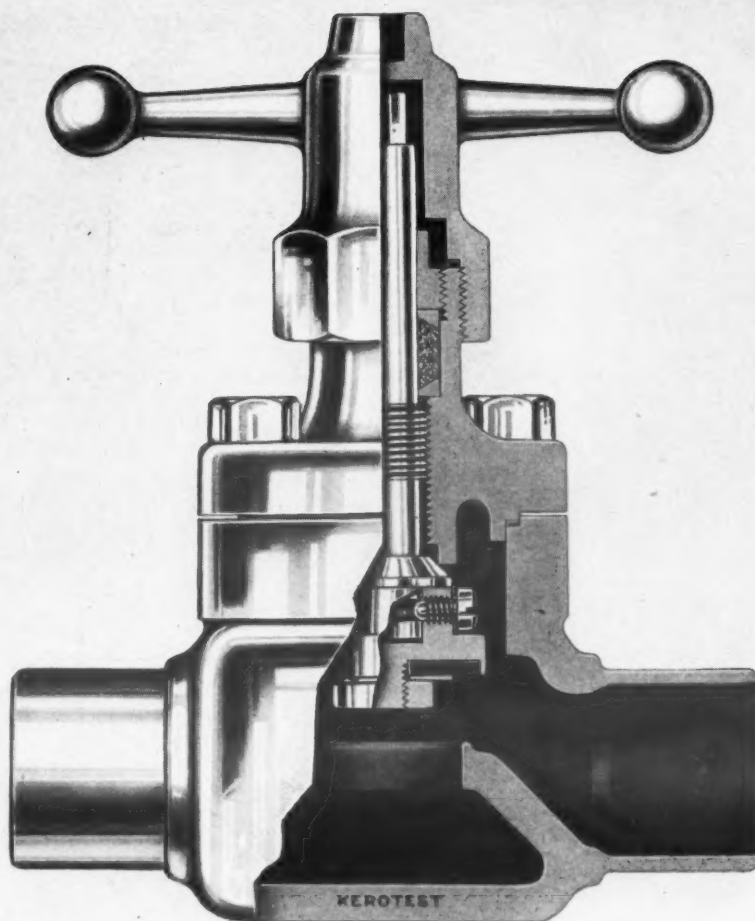
Motor housing of the shear serves as the handle of the tool to leave the other hand of the operator free for manipulating the work. Front head can be loosened and turned to either right or left and set at an angle of 30° or 90° when space limitations make it desirable to cut at an angle to the machine.

Alco Chicago Factory Branch Now In Larger Quarters

CHICAGO—Factory branch office of Alco Valve Co. here has been moved to new and larger quarters at 433 E. Erie St. Larger stocks will be carried at the branch, for improved service to customers in the Chicago area. Ample parking facilities are available at the new location.

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Just divide their cost by the years they last and you can appreciate the plus values built into Kerotest Valves and Fittings—why Kerotests are considered an asset by leading manufacturers of refrigeration and air conditioning equipment throughout the industry.

One of the many Kerotest Valves now in large demand for modern air conditioning is the recently developed Kerotest Bronze Globe Valve with sweat connections made an integral part of the body, thus doing away with the need for adapters.

Like all Kerotest Valves, this valve assures a full flow of the refrigerant equal to the inside diameter of the tubing and is designed with a non-rotating stem head which eliminates wear on the body seat. Long, trouble-free life is the natural result.

Sizes of these modern air conditioning valves range from 7/8" to 4 1/8" solder joints. Valves with female pipe connections are also available from 1" to 2" through Kerotest Jobbers everywhere.

KEROTEST MANUFACTURING CO.
PITTSBURGH, PA.

Beauty In Cold Control Design Adds To Refrigerator Value

Engineer Describes Mechanics of 12 Systems

By C. F. Robbins, Development Engineer, Cutler-Hammer, Inc.

What sells refrigerators?
How can we make people want to buy the refrigerators we produce?
How can we increase our margin of profit on the refrigerators we sell?

Household electric refrigerator manufacturers have been seeking the answers to these questions annually. They arrive at various conclusions, offering to the consumer a wide choice of designs.

Beauty, convenience, and cost are the three major considerations of the consumer. Performance is now "taken for granted."

"Pride of possession" is perhaps the largest factor in determining which refrigerator to buy, after the need for an automatic refrigerator is realized. A refrigerator is one of the largest pieces of kitchen equipment in use today. It is conspicuous in the average home because of its size and its location for convenience.

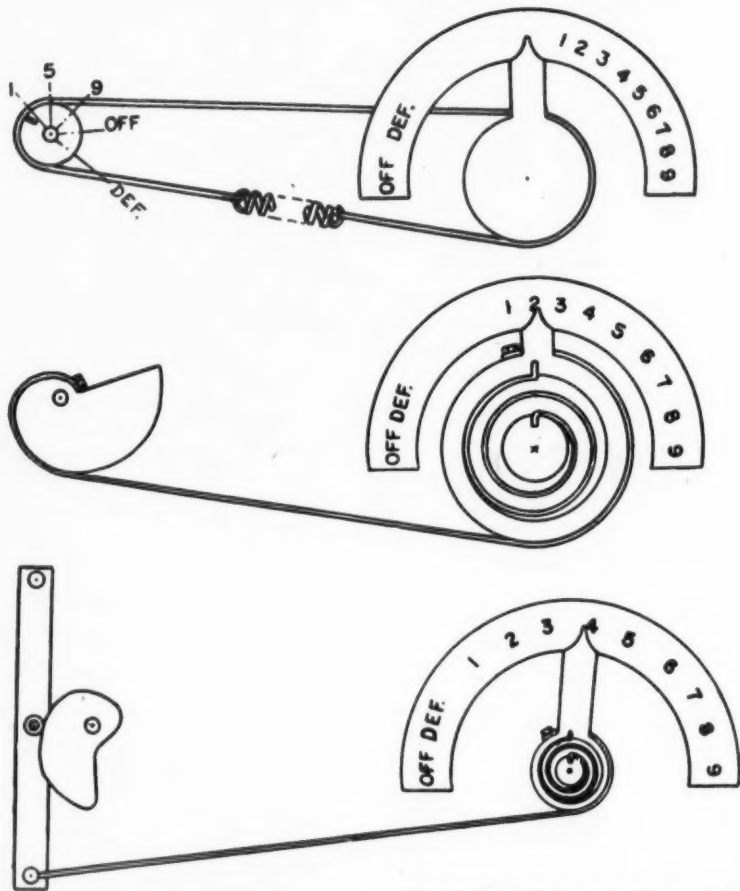
Therefore, the exterior must have eye appeal. Owners want to be just as proud of the interior. Therefore, it also must have interior beauty.

Convenience of location alone is not sufficient. Interiors must be arranged so that foods will be properly placed with a minimum of time and thought by the housekeeper. Mechanical devices and adjustments requiring attention must be capable of attracting attention and capable of easy adjustment.

The extra margin of profit is made by supplying at low cost the extra features that add to the beauty and convenience and, therefore, value in the mind of the consumer for which he will pay more. Improvements in appearance and convenience can often be obtained at no additional cost by proper design.

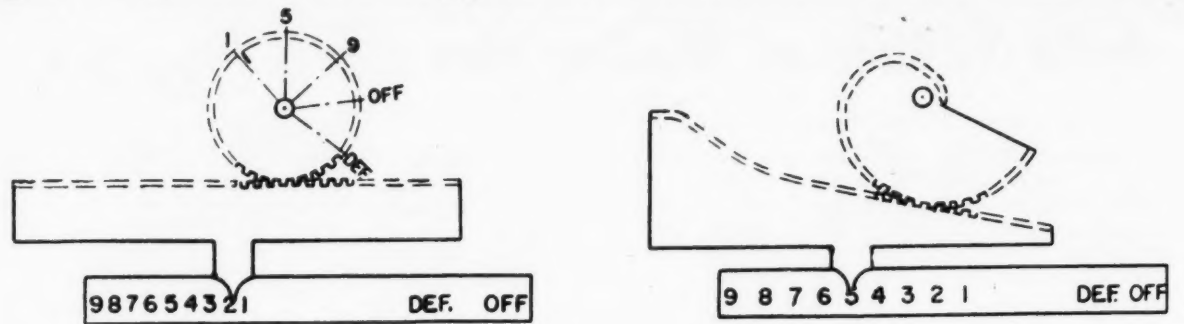
The writer is not an artist capable of producing beauty but, as a consumer capable of recognizing beauty and as a control engineer, hopes by this article to contribute ideas to the refrigerator manufacturers on mechanical arrangements of "cold controls" around which artists can build beauty and convenience at low cost.

Figs. 5, 6 & 7—Cable Drive With Rotary Dial



Illustrated above are three different types of cam and cable arrangements operating pointers on a rotary indicator. Steep cams operating pointers are to be preferred to having the cams built into the controls themselves.

Figs. 1 & 2—Two Types of Rack & Pinion Gearing



Although these two designs are equal in cost, the cam type (on right) is preferred.

"Cold Controls" have approximately a straight line relationship between angles of knob rotation and temperature change unless some special provision is made to alter this condition. Running positions of the "cold control" are usually well below freezing temperatures because thermostats usually operate on evaporator temperatures. Defrosting positions are considerably above freezing temperatures.

Consequently a "straight range" control has a blank space on the dial between running and defrosting position. If by proper design this blank space is partially or wholly utilized to spread out the running position numbers, better appearance and greater convenience in adjusting to a particular position are obtained. This can often be accomplished in the case of remotely driven indicators without additional cost.

Household refrigerator manufacturers have commonly used remote indicators for various reasons, as follows:

1. To improve appearance or elaborate, as in the use of colored or lighted, opaque or translucent scales.
2. To obtain straight line scales.
3. To obtain space for larger scales.
4. To reduce the amount of angular rotation of the indicator as illustrated in Figs. 4, 5, 6, and 7 where 322° knob rotation produces 180° pointer movement.

The accompanying drawings show various types of dials and indicators, and the results they accomplish. All figures use identical thermostats. The only difference between figures is in the type of drive to the indicator or to the "cold control" shaft.

The rack and the gears in the two designs shown in Figs. 1 and 2 would be either punchings, die castings, or moldings. The cost of each of the two designs would be the same. The scale proportions for the cam gear type are far better than the straight rack and gear type for convenience and beauty.

In the design shown in Fig. 3 the cold control shaft is driven through eccentric gears, arranged so that the control shaft travels the fastest relative to knob movement from No. 1 to defrost, thus reducing the dial space between these positions. The amount of improvement can be determined by comparing position spacing with Fig. 1.

The use of cams to operate pointers, as shown in Figs. 4, 5, 6, 7, and 8, is more satisfactory than the use of cams built into controls to drive "cold control" springs. Knobs turn more easily and greater flexi-

Fig. 4—Cam & Lever With Gear Arrangement

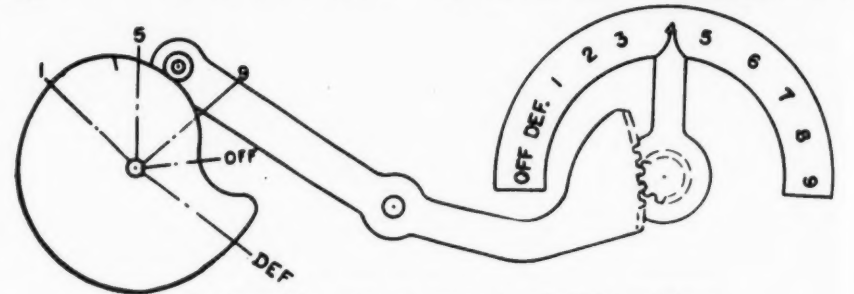


Fig. 4 shows the use of cams to operate pointers.

bility in dial layouts can be obtained.

Steep cams built into controls tend to increase the undesirable tendency for the knob to change its adjustment automatically, and to increase the effort required to turn in the warm direction. Steep cams to operate pointers have little effect on the knob torque, allowing better appearing and more convenient scales.

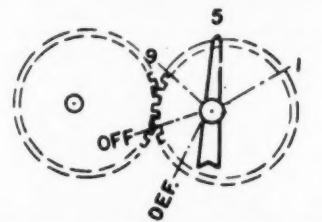
Perfect dial spacing and multiplication of movement can be obtained conveniently by the schemes shown in Figs. 7 and 11. Space requirements are greater for these designs.

The pantograph movement is good as a visible indicator or as a means of throwing a shadow on a translucent scale. It appears in either case as a horizontal bar moving vertically.

Horizontal motion due to the rotation about pantograph bearings is not noticeable when the indicator extends completely across an opening in the cover plate. It can also be used as a vertical bar traveling horizontally across a horizontal scale, but usually there is not sufficient space in the vertical direction in an evaporator shield.

However, the mechanism can satisfactorily be condensed to a much smaller space than indicated by the sketch. Other means can be provided for holding the pointer in a horizontal or vertical position and thereby eliminate one arm of the pantograph for lower cost. One end of the pointer support can be guided in a circular groove or the pointer can be counter-balanced by a weight

Fig. 3—Eccentric Drive



Eccentric gear drive reduces dial space between No. 1 and defrost positions.

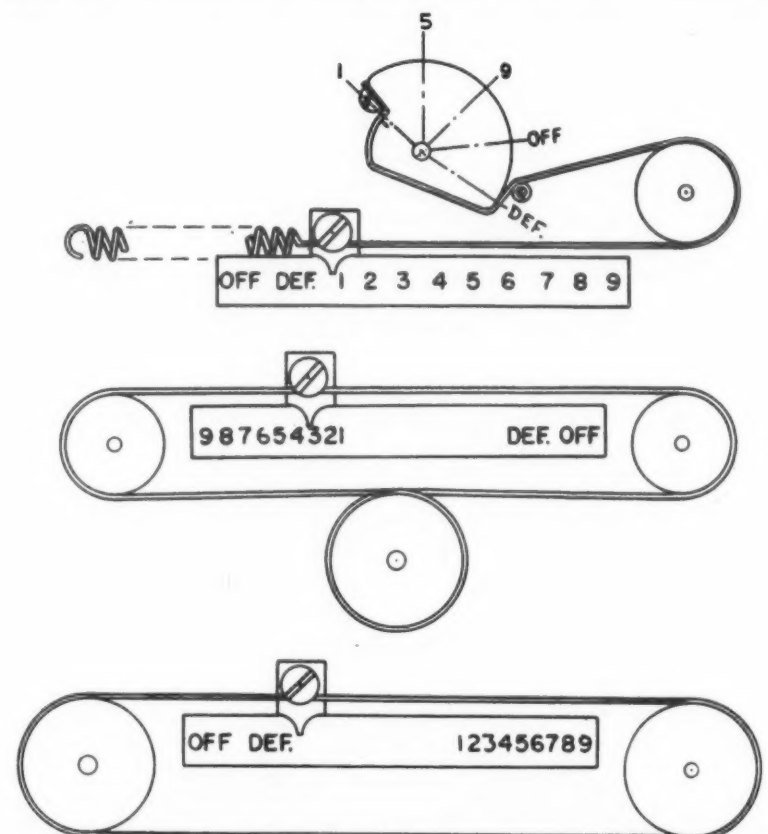
to maintain its direction.

Figs. 9 and 10 show straight line indicators. The control can be mounted at either end or in the middle as desired. These designs leave the scale free of any light obstruction from the rear. Therefore, they are suitable for translucent scales as well as opaque scales.

The drive in Fig. 12 can be a flat spring traveling in guides or a coil spring traveling on a rod. It is shown with an eccentric drum, on which the spring is wound, for better spacing of numbers. A concentric drum would be slightly less costly but dial proportions would be as shown in Fig. 1. A larger scale for a given space can be obtained with this mechanism than with any other shown.

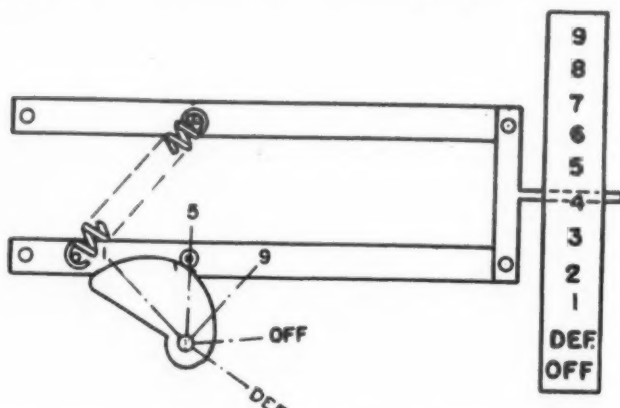
No one design is best suited to all applications. Any of the designs may be better suited to certain temperature specifications or artists' (Concluded on Page 19, Column 1)

Figs. 8, 9 & 10—Cable & Horizontal Scale



Application of cable drive to horizontal or vertical scales.

Fig. 11—Cam & Pantograph Device



Pantograph arrangement is best as visible indicator or for throwing a shadow on a translucent scale.

SERVEL Silver Fleet

Smooth and silent as a sailboat, Servel's "Silver Fleet" refrigerating machines offer you a standard of operating efficiency that is 3 to 5 years ahead of the field. Ask for the new 72-page catalog. Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Ind.

COMMERCIAL REFRIGERATING MACHINES

Dayton V-BELTS

Silent, vibrationless, dependable, long-lasting. Powerful grip prevents slippage. A nearby distributor carries a complete stock for appliances and machines.

THE DAYTON RUBBER MFG. CO., DAYTON, OHIO

World's Largest Manufacturer of V-Belts

At Last THE Humidome

COMBINES IN ONE MACHINE WINTER HUMIDIFICATION. SUMMER SPOT COOLING

Dealers' territories open. Write at once for complete information. Address!

THE HARRY ALTER CO.

1728 S. MICHIGAN AVENUE, CHICAGO, ILL.

ACME INDUSTRIES, INC.

JACKSON MICHIGAN

LOW SIDE EQUIPMENT

A COMPLETE LINE OF COMMERCIAL REFRIGERATORS AND DISPLAY EQUIPMENT

STAINLESS STEEL

GEORGE MANUFACTURING CO. BOSTON, MASS.

WRITE FOR OUR NEW CATALOG

Service Letters

Correcting Inefficiency Of Belt-Driven Majestic

Midwest-Timmermann Co.
Davenport, Iowa
Nov. 13, 1939

Editor:
In one of this year's issues of AIR CONDITIONING & REFRIGERATION NEWS, sometime this summer I think, you had a service article regarding a method of correcting inefficiency in a Majestic belt driven type compressor body.

Although I have most of the copies of this paper, I fail to find this particular copy. It has to do with drilling a hole inside the compressor, giving dimensions, etc.

I would appreciate it very much if you would tell me where I could obtain this issue or this information.

J. L. FISH

Answer: The article to which you refer is probably the answer to a question about the installation of a model 200 Majestic compressor which appeared on page 12 of the March 15, 1939 issue of AIR CONDITIONING & REFRIGERATION NEWS.

Chart For Estimating Commercial Job Load

Fedders Mfg. Co., Inc.
Boston Branch
712 Beacon St., Boston
Nov. 7, 1939

Editor:
Some time ago I saw an item in your paper which concerned wall type coils. This article gave the "K" factor used in figuring the coils which were to be mounted on the side wall of a walk-in box.

Although I have checked through the copies of your paper which I have saved, I do not seem to be able to locate this particular item. I would appreciate it very much if you could send me this information. I believe the item appears in the News between January and March of this year.

NORMAN C. HONECKER,

Manager

Answer: We believe that the article you had in mind was the one entitled "Chart to Provide Estimates of the Heat Load in Commercial Refrigeration," which appeared on page 15 of the March 22 issue of the News. This chart describes various quick calculations to be used in determining coil size.

VibraSeal Corp.

Perfection Stove Co.
Cleveland, Ohio

Editor:
The Dec. 6 issue of the News carried an article describing a new gasket for tubing connectors, made by the VibraSeal Corp., Detroit. A letter addressed to this company was returned to us marked "Not in Directory." We would appreciate your giving us the address of this company.

K. W. RAUSCH,

Engineering Department

Answer: VibraSeal Corp., 2832 E. Grand Blvd., Detroit, Mich.

for BETTER SERVICE
EXTRA DRY ESOTOO
V-METH-L
METHYLENE CHLORIDE
VIRGINIA SMELTING CO.
WEST NORFOLK, VA.

A Dehydrator that is really Dry. Mueller Brass Co. Dri-Drier.

MUELLER BRASS CO.
Port Huron, Mich.

We Sell Only Thru
Distributors of refrigeration and insulation. Get particulars on our **HyDroLoc Individual Lockers** the locker that has popular demand. Master Refrigerated Locker Systems, Inc. 121 Main St. Sioux City, Iowa
125,000 Masterbuilt Lockers in Use

QuiKold BEVERAGE COOLERS
10 MODELS WRITE FOR CATALOG
S&S COOLERS
LIMA, OHIO

Comparing Condensers And Cooling Towers

Harwell Appliance Co.
Heating and Cooling
Jackson, Mississippi
Oct. 19, 1939

Editor:

Could you furnish us any comparative data as to the efficiency of evaporative condensers and the different type cooling towers?

We have encountered this question on numerous occasions in the sale of air conditioning. It has been our contention that the cooling tower is more efficient than the average evaporative condenser. However, we have no engineering data to substantiate this claim, and if we are in error, we would like to know it.

E. A. HARWELL

Answer: There is a comprehensive discussion of this subject in Manual No. A-5 of the Air Conditioning Made Easy series of manuals which we publish. This book sells for \$1.00.

You might also get some information on this subject from the newly formed Water Cooling Tower Association, c/o W. J. Parker, 7 E. 44th St., New York, N. Y.

King-Kold No Longer Being Manufactured

General Electric Co.
420 Madison Ave., Toledo, Ohio
Editor:

Please inform us if the King-Kold refrigerator is still manufactured, and if so, by whom. Also, if manufacture has been discontinued, where spare parts can be obtained.

K. C. DAVIS, Sales Dept.

Answer: The King-Kold refrigerator is no longer manufactured and has not been for a number of years. We believe that your best possibility for obtaining replacement parts for the unit is to try the Perfection Refrigeration Parts Co., Harvey, Ill.

Replacement Units For Majestic Boxes

Barkman Outfitting Co.
Tawas City, Michigan
Nov. 17, 1939

Sirs:

We have recently taken in a Majestic refrigerator and are wondering whether you can tell us from whom we can secure a replacement unit. Any information you can give us will be appreciated.

M. BARKMAN

Answer: Contact the following companies regarding replacement units for Majestic refrigerators:

Rex Refrigeration Service
2226 S. State St., Chicago, Ill.
Refrigeration Maintenance Corp.
321 E. Grand Ave., Chicago, Ill.
G & G Service Co.
5801 Dickens Ave., Chicago, Ill.

Sweden Freezer Co.

Kason Hardware Corp.
127-137 Wallabout St., Brooklyn, N. Y.
Editor:

We would appreciate receiving from you the address of the Sweden Freezer Mfg. Co. of Seattle.

H. A. BRUNBERG

Answer: Sweden Freezer Mfg. Co., Bell St. and Western Ave., Seattle, Wash.

Finds Manuals Great

813 N. 22nd St.
St. Joseph, Mo.

Sirs:

I have your Commercial Refrigeration Manuals C-1 and C-3. Also air-conditioning manuals Nos. A-2, A-5, A-6, and A-7 and think they are fine.

ADOLPH KELLER

Finds A 'Pal'

Bagley, Wis.
Jan. 5, 1940

Sirs:

Please extend my subscription to AIR CONDITIONING & REFRIGERATION NEWS for 52 weeks and send me manuals SF-1 and SF-2 for which I enclose check for \$4.00, as per your offer in Dec. 20 issue.

The News and manuals are a great "Pal" to the service man.

R. W. HORNBY

Adds Frigidaire Line

SUMTER, S. C.—K. B. Hill Plumbing Co. has been appointed Frigidaire dealer in this territory.

Head Michiana Servicemen



Affairs of the Michiana Chapter of Refrigeration Service Engineers Society for 1940 are in the capable hands of these two officers, elected at a recent meeting. Left: J. A. Pechi, president, who was re-elected; right: L. E. McKee, secretary.

Servicemen Make Good As Salesmen For This Dealership

OAKLAND, Calif.—"Don't underestimate the value of the service man as a salesman of refrigeration—if you cooperate in training him to develop leads," says H. Hauschildt, who, with but two men in his service organization, finds a profitable follow-up business.

These two mechanics, he points out, actually do a good job of preliminary "selling"—although they do not close sales—because they have access to homes on a definite mission. "After they have made two or more calls," he said, "possibly to correct some defect that has developed in the same outmoded or obsolete refrigerator, it is an easy matter to call the customer's attention to the fact that all the trouble and expense can be eliminated by purchasing a new one."

Something along this line, Mr. Hauschildt says, gets the customer's attention, and the way for the salesman is then opened to make a call.

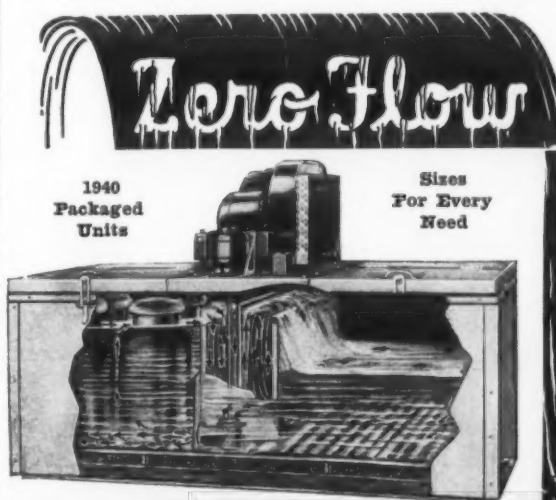
Canavan To Head Service For Legasse & Harris

CAMBRIDGE, Mass.—Joseph A. Canavan has been appointed service manager of Legasse & Harris Refrigeration Corp., Kelvinator commercial distributor, to succeed Charles C. E. Harris, who has resigned to start his own business. Joseph A. Legasse will carry on the business under the present corporation name.

'World's Tallest Man' Draws Crowds To Dealer's Store

RAEFORD, N. C.—A "gigantic" promotion was staged recently by Baucom's Cash Store, Frigidaire dealer here, when it sponsored the appearance of the world's biggest man—the much publicized Robert Wadlow.

Mr. Wadlow, the 21-year-old giant who measures 8 feet 9½ inches tall and wears a size 37 shoe, attracted a crowd of some 4,000 people to the Baucom establishment.



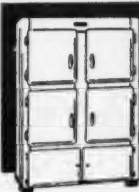
WILSON CABINET CORP., Smyrna, Del.

Condensing Units for every commercial refrigeration and air conditioning requirement . . . Also packaged air conditioners.



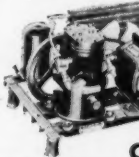
Established 1854

Curtis Refrigerating Machine Co.
Division of Curtis Manufacturing Co.
1912 Kienlen Ave., St. Louis, Mo.



COMMERCIAL REFRIGERATORS

World's most complete line of commercial cabinets—13 to 84 cu. ft. capacity.
MIDWEST
MFG. COMPANY • GALESBURG, ILL.



Jomoco

CONDENSING UNITS

Precision built for efficient operation.

GALE PRODUCTS
1635 Monmouth Blvd. Galesburg, Ill.

THE 1940 KOCH LINE

The Koch line of commercial refrigerator cabinets is complete . . . profitable . . . easy to sell. It includes refrigerators for groceries, meat markets, taverns, bakeries, florists, and institutions; as well as display cases and walk-in coolers. Koch sells no condensing units. Any standard commercial unit will refrigerate Koch cabinets. Big money here for qualified distributors.

FREE CATALOG

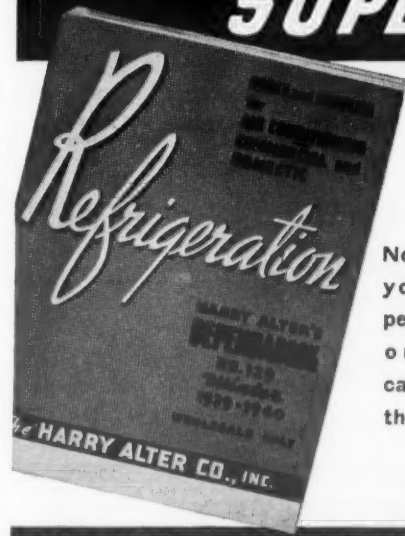
A new 102 page catalog in color. Get your copy. Ask for franchise information. Write

KOCH REFRIGERATORS

NORTH KANSAS CITY, MISSOURI

EITHER WAY YOU GET SUPER SERVICE

... FROM OUR BIG CATALOG
... FROM OUR 12 BRANCHES



No matter whether you order "in person" or from our complete catalog, you get the same careful, "individual" attention.

12 COMPLETELY STOCKED BRANCHES

THE HARRY ALTER CO.
1728 S. MICHIGAN AVENUE, CHICAGO, ILLINOIS
3 CHICAGO BRANCHES, NORTH, WEST, SOUTH

NEW YORK
BROOKLYN
BRONX
JAMAICA
NEWARK
DETROIT
CLEVELAND
ST. LOUIS

MILK-COOLING by WILSON

MODERN SYSTEMS PERFECTED
VARIED TYPES MEET ALL NEEDS

ZERO-FLOW LEADS IN ALL-DUTY EFFICIENCY

Wilson catalogs show in detail the performance factors of types and sizes of coolers engineered for every milk-cooling need. Each installation of Wilson equipment is scientifically checked against the individual dairyman's cooling load. The results of Wilson's research are seen in customized cooling that is rapid, dependable, and economical. For example, the Zero-Flow

Cooler, designed for the dairyman who cools two milkings daily, features an exclusive high-water level maintained selectively in the two equal cooling compartments. Each milking is automatically cooled and stored in its own compartment, with never any rehandling of cans. Cooling is extremely fast; storage is maintained indefinitely.

Write for franchise possibilities



Sells Faster Because It Cools Faster!
IDEAL SPEED COOLER
 Ideal Beer Cooler Co.
 2953 Easton Ave., St. Louis, Mo.



A MODEL FOR EVERY NEED

Widest variety of standard stock sizes and styles in the industry.

The one-quality—all porcelain line.—

Protected by

Famous Fogel Lifetime Vision.

Hundreds of successful dealers.

Some territories still available.

INQUIRE TODAY

FOGEL • REFRIGERATOR COMPANY Since 1899
 16th & Vine Sts., Phila., Pa.



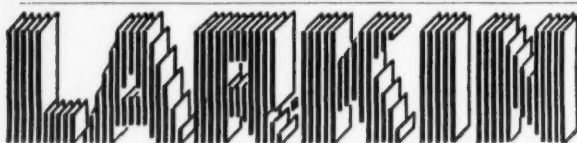
MAKE BIGGER PROFITS

TYLER full line dealers and distributors are setting new records for sales and profits. Tyler's big line enables you to completely outfit modern food stores and opens up hundreds of live prospects in other fields. Famous Welded Steel construction. Phenomenal values. Display Cases... Reach-Ins... Walk-Ins... Vegetable Displays... and special type refrigerators to fit all needs. New 1940 line now ready. Write for details.

TYLER FIXTURE CORP., Dept. E, Niles, Mich.

New York Office: 681 W. 26th St. Boston Office: 683 Beacon St. Chicago Office: 1863 W. Ogden Ave.

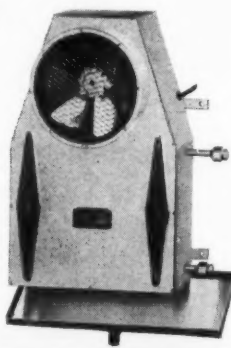
TYLER WELDED STEEL Refrigerators
 REACH-IN BOXES—40% greater capacity



WALL HUMI-TEMP UNITS
 You Will Increase Your Profits
 One Customer Sells Another
 Units For Every Need

Today—See Your Jobber or Write Direct to

LARKIN COILS, INC. General Offices and Factory
 519 Fair St., S.E., ATLANTA, GA.
 Originators of the Cross Fin Coil.



NEW 1940 INSTANT COLD Beverage COOLER

PERFECT EFFICIENT COOLING IN THE WARMEST WEATHER
 They come through when the cooling efficiency is needed most.
 Liberal Distributorships are Available
 Write for illustrated circulars and general catalog

E. B. MUZZARELLI and CO.
 1421-27 Chestnut St., Kansas City, Mo.



TROUBLE PREVENTERS

Oil film forming on the tubing walls, evaporators and condensers reduces the rate of heat transfer and decreases efficiency from 16 to 30%.

Aminco Oil Separators trap oil as it leaves the compressor and return it automatically to the crankcase.

They prevent the formation of hard carbon by trapping wax, entrained moisture and other impurities. Sizes from 1/2 ton to 120 tons may be used with any refrigerant except ammonia.

AMERICAN INJECTOR COMPANY

1481 FOURTEENTH AVENUE, DETROIT, MICH.

Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.



L. H. GILMER COMPANY

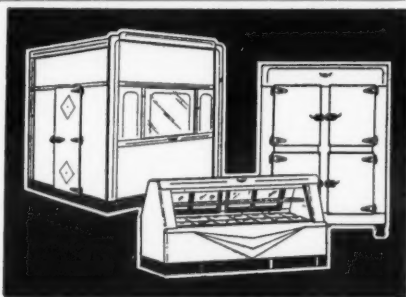
For details write to: Taxonomy Philadelphia

Cook Freezer Sales Assumed By Wilson

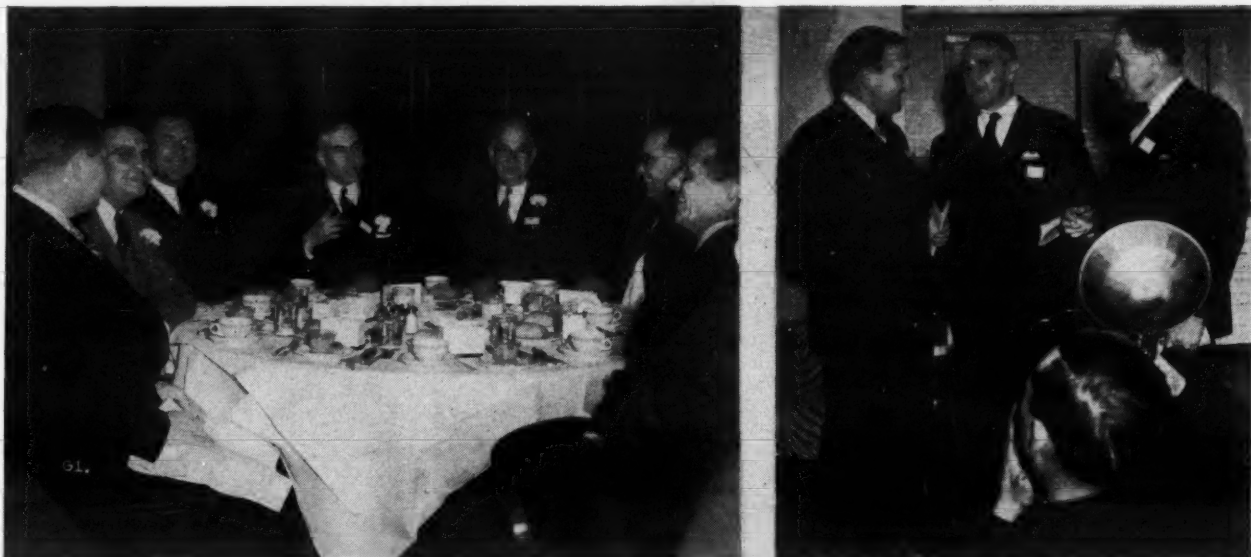
NEW YORK CITY—R. S. Wilson, trading as Argos Products Corp., has taken over the selling rights of Cook counter freezer (the "frozen malted" machine), and will handle national distribution of this unit.

Mr. Wilson has appointed Harry Adler to handle the export business on the Cook counter freezer.

Mr. Wilson was formerly zone manager for Mills Novelty Co.'s freezer division on the Pacific coast, and later was New York zone manager for this division. After leaving Mills he handled distribution of the Tuthill freezer, manufactured by Tuthill Pump Co., in northern New Jersey, New York, and eastern Pennsylvania.



G-E Discusses Its 1940 Program With Utility Executives



Left: Company and utility executives discuss problems at General Electric's central station conference in Bridgeport. Here (left to right) are: M. E. Skinner, Buffalo, Niagara & Eastern Power Co.; J. L. Haley, Central N. Y. Power Corp.; C. E. Wilson, G-E president; H. L. Andrews, vice president; C. W. Appleton, vice president; E. N. Graham, Bangor Hydro-Electric Power; and E. F. Jeffe, Consolidated Edison Co. of N. Y. Right: B. A. Siple, Jersey Central Power & Light Co.; Lawrence Jennings, G-E; R. H. Giedde, Florida Power.

Western School Agrees To FTC Stipulation

WASHINGTON, D. C.—Highland Technical Institute, Inc., Los Angeles, operator of an "Extension-Shop Training Course in Air Conditioning and Electric Refrigeration," has entered into a stipulation with Federal Trade Commission to cease misleading representations in the sale of these courses.

The company has agreed to cease using the word "institute" as a part of or in connection with its trade name, or in a manner suggesting that the trade school is an organization conducted for the promotion of learning, philosophy, art, or science, and has equipment and faculty such as to entitle it to be designated as an institute.

Other representations to be discontinued are that the respondent pays students \$1.40 a day or provides board and room during the shop training period, unless it is explained that these payments are made from funds previously collected from the students for that purpose; that any service is free, when it is in fact part of the course for which the student pays; that any person can master the study courses; or that the training or instruction offered "makes it possible for your dream to come true"; or enables one to cash in and begin earning money before finishing either the home work or the shop training.

The respondent also agrees to cease using the "help wanted" columns in newspapers in such manner as to deceive prospective students into the belief that jobs are offered, and to cease representing that the trade school in question is an engineering school or offers engineering instruction.

New Hampshire Store Destroyed By Fire

LACONIA, N. H.—The electrical appliance store operated by John E. Agnew was ruined by a fire which swept through a business block in the heart of the downtown district early in the morning of Jan. 9, with a total loss estimated at more than \$50,000.

Some of the appliance store's stock was saved, however, by spreading waterproof covers over electric refrigerators, ranges, and other equipment.

By an odd coincidence, the blaze was discovered by Police Officer William A. Agnew, a son of the appliance store owner.

Hall Named Range Specialist For Hotpoint In Illinois

CHICAGO—C. B. Hall has been appointed Hotpoint range and water heater specialist for northern Illinois, according to an announcement by L. E. Buxton, manager, Chicago district, Edison General Electric Appliance Co.

Mr. Hall has had 13 years' experience in the sale and merchandising of Hotpoint home appliances. He comes to Hotpoint from the General Electric Supply Corp., Indianapolis.

Skinner New President Of Buffalo League

BUFFALO—Merrill E. Skinner, vice president of Buffalo Niagara Electric Corp., was elected president of the Electrical League of the Niagara Frontier at the annual meeting in Buffalo Athletic club, Jan. 9.

Other officers are: Robert D. Glennie and Raymond W. Mitchell, vice presidents, and Richard Wahle, secretary-treasurer. Weldon D. Smith was named a member of the executive committee. Samuel S. Vineberg is secretary-manager.

Directors voted to change the name of the organization to the Electrical Association of the Niagara Frontier, and a special committee was named to take steps toward incorporation. Chairmen of promotional committees include:

Entertainment, Don Hathaway; membership, Mr. Glennie; merchandising division, Charles Hahn, Jr.; radio, Edward T. Ball; refrigeration, Ronald H. Davison; ranges, Walter S. Schmidt; other appliances, Carl J. Rohrer.

Members of the recently named board of directors are: Mr. Ball, G. H. Calkins, T. W. Connette, Mr. Davison, Mr. Glennie, Mr. Hahn, Jr., H. Mallon, Mr. Mitchell, Karr Parker, Mr. Rohrer, R. P. Sackett, J. L. Scanlon, Mr. Schmidt, Mr. Skinner, Mr. Smith, J. H. Spraggon, E. F. Strong, K. L. Thielscher, Mr. Wahle, A. J. Wolf, L. A. Wooley, and C. P. Yoder.

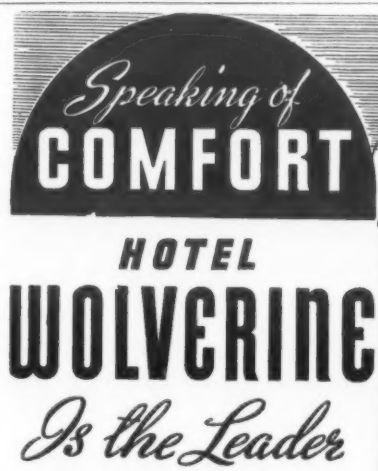
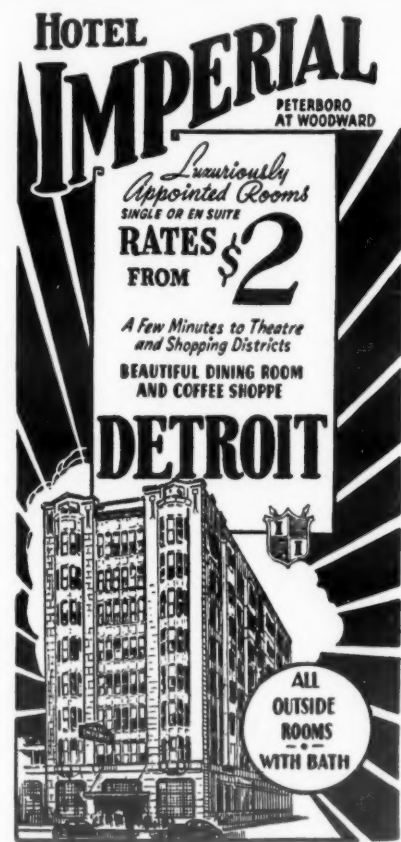
G-E Orders Increase 77% In Last 1939 Quarter

SCHENECTADY, N. Y.—Orders received by General Electric Co. during the fourth quarter of 1939 amounted to \$112,166,535, compared with \$63,419,265 in the final quarter of 1938, an increase of 77%, reports President Charles E. Wilson.

G. D. Andrews To Head Celotex Promotion

CHICAGO—G. D. Andrews has been appointed sales promotion manager of Celotex Corp. Prior to this advancement, Mr. Andrews was a member of the Celotex merchandising staff engaged in organizing and directing national sales promotion.

Associated with the corporation since 1928, Mr. Andrews first entered the business as a field promotion man working out of the Chicago division office and covering Michigan and northern Ohio. In 1933 he became a member of the general sales department.



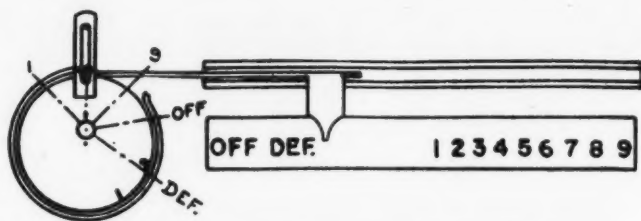
Comfort at the Wolverine means more than just its excellent accommodations. An atmosphere of congeniality and friendliness is ever-present within this famous hotel, making each guest feel the warmth of home—in the courteous service of trained employees and in the hospitable attitude of the management.

500 ROOMS \$1.50 WITH BATH from

ELIZABETH ST. EAST AT WOODWARD AVE.



Fig. 12—Tape Drive Arrangement



Tape drive for maximum scale in small space.

Controls Must Have Proper Location

(Concluded from Page 16, Column 5) ideas than the others. Space requirements may also limit the selection. However, in most places Fig. 2 can be selected in place of Fig. 1, and Fig. 6, or 7 in place of Fig. 5, or Fig. 3 in place of ordinary gears (to shift the knob to a different location), obtaining better arrangements at little or no cost increase.

Experience has shown that the location, in the box, of controls and indicator mechanisms must be determined with care to prevent corrosion and the possibility of freezing up, especially in the cold or fast freezing positions. They should not be placed where any appreciable cooling effect is received directly from the evaporator, or moisture will condense and eventually give trouble. Keep these mechanisms "high and dry" outside the cabinet or in the top of the cabinet.

The trend in recent months has been toward direct indication by pointers on the knob. However, it must not be overlooked that the success of the automobile manufacturers from 1927 to 1940 has been due to the improvements in beauty and conveniences, which were obtained largely by adding and dressing up accessories at small additional cost. This hastened obsolescence increases replacements at greater profits and creates new sales.

Likewise, the success of refrigerator manufacturers in a saturated market will depend on their ability to hasten obsolescence by making refrigerators more beautiful and more convenient to create new desires in the consumers' minds.

GET PEAK PERFORMANCE
with **SPORLAN**
Controlled **TV**
Performance **VALVES**

The Most Accurate Control
Valve for Small Capacity Systems
The "TK" Thermo Valve
Alco Valve Co., St. Louis, Mo.

For Information on Motors
FOR ALL TYPES OF
Air Conditioning and
Refrigeration Equipment
WRITE TO
Wagner Electric Corporation
4441 PLYMOUTH AVE. ST. LOUIS, MO.

REMPE Knows
FIN COILS
PIPE COILS
ask **REMPE**
340 N. Sacramento Blvd., Chicago

'Tamper-Proof' Control Feature of New Heater Line

CLEVELAND — Deluxe "Modern-air" oil-burning heat circulators in three models have recently been announced by Globe Machine & Stamping Co. Three standard models, priced slightly lower than the deluxe units, also are available.

The models employ an exclusive "tamper-proof" heat control, located near the top of the cabinet. This device contains a spring safety clutch and knob that prevent accidental change in oil levels and flame height.

Below this valve is a stainless steel grille of artistic design. Grille and silver background are decorated with a border design of black enamel. A stainless steel grille, decorated with contrasting black, circles the front and side cabinet base. Entire cabinet is finished in two-tone ripple brown.

All units contain the Standard Breeze pot type burner. Oil inlet is claimed to enter the burner where carbon cannot form. Patented automatic draft control device is designed to maintain proper balance of air for good combustion, reducing stack loss of heat and giving higher, uniform room temperature.

Large fuel tank is provided for the distillate No. 1 furnace oil which the heater uses. Humidifier tank also is provided to maintain moisture content of room air at healthful levels. Automatic oil valve is claimed to prevent overflow and eliminate fuel odors. Filter screen is located for easy cleaning.

Installation is said to be easy, only requirement being the pipe outlet to the chimney.

CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words, four cents each. Three consecutive insertions \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS WANTED

MANUFACTURERS ATTENTION! Does the St. Louis market present difficulties for you? If it does, we both can profit by your answering this ad. Have been in the appliance industry for 21 years and have successfully been retail salesman, wholesale salesman, wholesale sales manager, manufacturer's district manager and manufacturer's personnel manager. Have wide acquaintanceship in the industry and particularly in the St. Louis area among dealers and distributors. If the above experience interests you, am very sure I can convince you why a connection would be mutually profitable. Box 1194, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

A SMALL progressive Chicago firm de-

sires to contact an engineer with sales experience of heating, ventilating, and air cooling, capable to design comfort conditions, layout and estimate cost of sheet metal work, etc. Knowledge of commercial refrigeration desirable but not necessary. Man chosen will work on salary. Write giving complete information as to age, education, experience, present situation, salary desired, etc. Box No. 1191, Air Conditioning & Refrigeration News, Detroit, Mich.

SALESMEN WANTED

COMMERCIAL REFRIGERATOR and display case salesman of proven ability. Able to close sales personally, and capable of organizing and managing sales force. Several desirable openings in various sections of the country. Must be able to furnish bond. Salary or drawing account to qualified applicants. Write Box 1195, Air Conditioning & Refrigeration News, listing experience and qualifications.

EQUIPMENT WANTED

WE BUY UP manufacturers, jobbers, dealers surplus and discontinued refrigeration equipment. We are interested in compressors, meters, controls, etc. We buy anything in refrigeration. Send us your list of merchandise that you are closing out. R & R REFRIGERATION CO., 508 Morris Ave., Bronx, N. Y.

EQUIPMENT FOR SALE

TAG DUAL pen pressure recorders—head pressure zero to 150 pounds—suction pressure 30 inches to 30 pounds—telechron self-starting clock—110 volts, 60 cycles—original selling price \$77.00. Used by prominent refrigerator manufacturer. Have been thoroughly reconditioned. A bargain at \$20.00 each. WARREN W. FARR, 1412 Marlowe Avenue, Lakewood, Ohio.

EQUIPMENT FOR SALE

1/4 H.P. Frigidaire Model G units, running condition "as is"—\$8.50 each. Majestic & Grunow fans, rebuilt, \$1.35 each. Assorted pumps, "as is," \$1.50 each, 50¢ each extra for crating. 1/4 H.P. 1929 & 1930 Kelvinator high side, "as is," \$6.50 each. Assorted "as is" boxes—\$10.00 each. Write ASSOCIATED REFRIGERATOR PLANT, 3028 W. Hunting Park Avenue, Phila., Pa.

ALL MODELS and sizes Grunow refrigerators, complete in every detail, \$10.50 each, F.O.B. Philadelphia. For further details write ASSOCIATED REFRIGERATOR PLANT, INC., 3028 W. Hunting Park Avenue, Phila., Pa.

ELECTRIC ICE CREAM cabinets 1939 chest models. Repossessed by finance company (bankrupt dairy). Sell at sacrifice, any quantities. Cabinets like new, in field four months. Can be purchased on three summer payments. No down payment by responsible purchaser. In storage and on sale, 2nd floor, 390 Fourth Ave. (E. 28th St.), New York City.

FORTY USED coils for refrigerated display cases and coolers, wall boxes. Big bargain. HUSSMANN DISTRIBUTING CO., 551 W. Washington St., Chicago, Ill.

REPAIR SERVICE

G. E. DR1—DR2—\$30.00; Domestic Westinghouse \$27.50; one year unconditional guarantee. Place order for any model G. E. or Westinghouse sealed unit. Shipments will be made from stock same day. Return old unit later. Our production line turns out completely rebuilt sealed units mechanically comparable to manufacturer's with replacement service inferior to none at prices that enable you to realize profit on resale. Send for Complete replacement schedule. REX REFRIGERATION SERVICE, INC., 2226 S. State, Chicago, Ill.

DOMESTIC TYPE thermostatic controls reconditioned like new. Precision work by experts. Years of satisfied customers, among largest in the country. All work guaranteed. Try us and be convinced. The largest thermostatic repair service in the country. It's your guarantee. Prices on request. UNITED REPAIR CO., INC., 342 W. 70th St., New York City.

GENERAL ELECTRIC DR1-DR2 Monitor Top units exchanged \$27.50 F.O.B. our factory. Send your defective unit. On receipt we make immediate shipment of completely rebuilt, refinished unit with one year guarantee. Like new in every respect. Westinghouse and other hermetically sealed units, prices on request. GENERAL REFRIGERATION MAINTENANCE, 220-22 West Huron St., Chicago, Ill.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired.

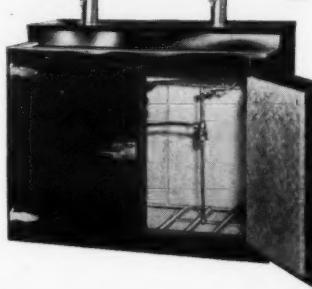
HALETRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

Specify PENN
AUTOMATIC CONTROLS AND SWITCHES
FOR RECOGNIZED RELIABILITY
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PENN ELECTRIC SWITCH CO.
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Cash in on the swing to DIRECT DRAW DISPENSING EQUIPMENT!



The entire line of Perlick Direct Draw Dispensers that has pioneered in the field and won't the favor of beer retailers everywhere, is available to Refrigeration dealers, to broaden their market and increase their profits. Dispensers are sold with or without compressor, but complete with evaporator and tapping equipment. Many models and styles—all thoroughly engineered and constructed. Write for complete information and prices, without obligation. See us at Booths 18 and 19 at the Refrigeration and Air Conditioning Show.

R. PERLICK BRASS CO.
IN MILWAUKEE

THE ACE of Tube Cutters



Of all the Imperial tools that are so widely used it is safe to say that the No. 174-F Tube Cutter is the "king of the crop" or the "Ace in the hole." You can buy cutters for less money, but you can't buy anything the equal of it

for handling tubing work. The tube rests against two rollers, with vertical groove, making it possible to remove flare, when desired. Brass forged body, chromium plated finish. Knurled handle. Complete with reamer.

No. 174-F for 3/16" to 3/4" O. D. Tubing \$2.75 Each

THE IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago, Ill.

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VALVES • FITTINGS • TOOLS
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ABSO-DRY
Pressure Sealed
DEHYDRATION STRAINER
TYPE 732
A new combination dryer and strainer. Dehydrant is confined in a felt sack inside a fine mesh brass screen, therefore particles cannot escape into system. Soldered brass shell with dispersion tube. Vacuum dried and pressure sealed. Choice of 5 dehydrants.
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Chieftain
FOR **ECONOMICAL** OPERATION
BUY A "CHIEFTAIN"
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DOUBLE YOUR PROFITS
Selling
THE PROFIT LINE FOR '40
Refrigerator and compressor sales go together. Sell both on one contract.
THE SHERER FRANCHISE OFFERS: *Complete line of cases, coolers and boxes. *New equipment under development opens new fields for compressor sales.
*Layout department—Store layouts without obligation. *Advertising—Sherer advertises by mail and in trade publications.
Write for catalog and franchise details, mentioning territory desired.
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America's Leaders
Ranco INC., COLUMBUS, OHIO, U.S.A.
Ranco KWS Household Replacement Control
Ranco RJS Household Replacement Control
Ranco G-2 Commercial Control

New Financing Plan Has 'Dealer Reserve'

(Concluded from Page 1, Column 3) reserve fund is payable to him twice a year, whether or not he has experienced any difficulty with repossessions on the appliances he has sold on instalment during that period.

"Nothing is of greater importance to the continued success of the appliance industry than adequate dealer profits," W. H. Crawford, vice president of Commercial Credit, said in announcing the new plan.

"Manufacturers are constantly striving to offer better products at lower costs, and, in doing so, to preserve dealer discounts. With so large a percentage of retail sales being made on time, it is essential that finance plans be so designed that they will conserve, rather than dissipate, the dealer's profits on the sales of the merchandise.

"Out of our reduced purchaser rates under the new finance plan, we provide a reserve to the dealer on all time-payment contracts which we believe is fully adequate to cover the expenses that are ever-present in any time payment method of selling, thereby conserving the full margin on the merchandise for the dealer as a profit."

Discount Buying Reported Curbed In Wisconsin

MILWAUKEE—That efforts of the Wisconsin Radio, Refrigeration & Appliance Association to stop discount buying of electrical appliances at wholesale have borne real fruit is evidenced by a survey of distributors and dealers at the end of the recent holiday shopping season.

Both wholesalers and retailers reported much improvement in this problem, and while no exact estimate of the dollar volume returned to retailers through the cutting down of wholesale and "catalog" buying by employees of large industrial plants, the association is confident that it ran into several thousands of dollars.

One distributor reported that a check of its dealers showed an "amazing" improvement. The check-up included dealerships in the vicinity of large industrial plants, where the group buying practice was a major problem in 1938, and it was found that very little trouble of this sort had been encountered last Christmas. Industrial leaders apparently are complying rather strictly with the new Wisconsin law restricting group buying for employees, this distributor said.

As a result of the association's efforts, in cooperation with other trade groups in the state and utility managers, most large industrial concerns are no longer even listing most of the nationally known appliance brands in their catalogs, it is reported.

Ruthenburg Is Member of AGA Refrigerator Group

NEW YORK CITY—Under the slogan "Life Begins in '40 for Gas Refrigeration," the American Gas Association has launched a year-around merchandising campaign in which more than 600 utilities and many gas appliance dealers will participate.

All activities of this drive will be directed by a committee headed by Bernard T. Franck, chairman; Louis Ruthenburg, vice chairman; John W. West, Jr., secretary; and R. J. Rutherford, retiring chairman of the committee, consulting chairman.

The 1940 selling season has been divided into four quarters, and Chairman Franck has announced that during the first quarter, emphasis will be placed on the replacement market.

Middleman To Manage Simon Co. Branch

BALTIMORE—William Middleman has been appointed sales manager of the Baltimore branch of Simon Distribution Corp., Hotpoint distributor in the Baltimore-Washington, D. C. area. Paul Neubert is the new field representative in the eastern shore and western Maryland section of the company's territory.

St. Louis ASRE Bids For 1941 Exhibition

ST. LOUIS—A move to bring the All-Industry Refrigeration and Air Conditioning Exhibition to St. Louis in 1941 was started by the local section of American Society of Refrigerating Engineers at its meeting Jan. 5 in the Colonial Room of Hotel Chase.

In a resolution addressed to the national body of A.S.R.E., the Refrigeration Equipment Manufacturers Association, the Refrigeration Service Engineers Society, the Refrigeration Supply Jobbers Association, "and all other organizations or individuals connected with the refrigerating and air-conditioning industry," the St. Louis section urged consideration of this city as the site of the 1941 show, since it "is more centrally located, and has excellent facilities for housing a national all-industry refrigeration and air-conditioning show."

Two speakers addressed the meeting, the first, H. D. Euwer of American Car & Foundry Co., St. Charles, Mo., presenting an illustrated lecture on "Air Conditioning of Railway Cars and Motor Buses," and the second, J. A. Rodgers of White-Rodgers Electric Co., St. Louis, talking on "Temperature Control by Means of Hydraulic Action."

H. C. Morrison was named official delegate from the section to the national mid-winter meeting of A.S.R.E. in Chicago. E. Gygas, vice chairman of the section, presided in the absence of Chairman A. B. Schellenberg, who was ill.

Westinghouse Promotes Mills & Beatty

(Concluded from Page 1, Column 2) the business. He soon became interested in working with electric ranges and rose to the managership of the range and water heater department in 1925. In his new capacity he will continue to make his headquarters at Mansfield.

Mr. Beatty, a graduate of the University of Wisconsin, spent four years in various phases of the range and refrigerator business—manufacturing, wholesale, and retail, before joining Westinghouse in 1930.

His first position with Westinghouse was as sales education supervisor of the refrigerator department, and in that capacity he traveled throughout the country. He later became sales promotion manager of the Northwestern district, with headquarters in Chicago, and in June, 1937, he came to Mansfield as sales development manager of the range and water heater department. He, also, will continue to maintain his headquarters in Mansfield.

Plan Rebuilding Service On National Scale

(Concluded from Page 1, Column 1) check will be issued for 50% of their "Blue Book" value, and a complete itemized schedule as to how much is due each dealer will accompany the check so that the distributor may in turn reimburse all of his dealers.

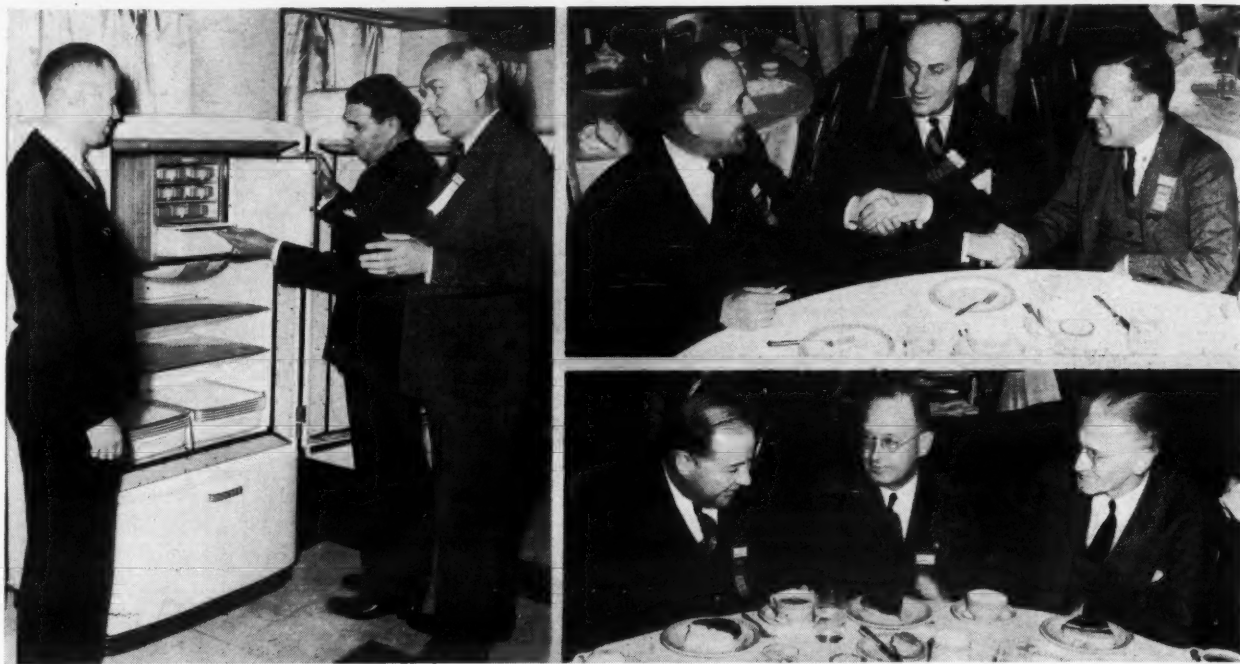
It is proposed that the distributor will truck the old trade-in refrigerators to his warehouse at the time that he delivers new boxes. The Associated Refrigerator Plant estimates that the average "Blue Book" evaluation for national trade-ins will be somewhere between \$10 and \$14 in 1940, which, they declare, means that the dealer will have to absorb somewhere between \$5 and \$7 on the trade-in transaction.

Emerson Names O. C. Schmitt Executive Vice President

ST. LOUIS—Oscar C. Schmitt has been elected executive vice president of Emerson Electric Mfg. Co. Mr. Schmitt formerly was vice president in charge of sales.

Raymond E. Otto, former manager of the company's motor sales, has been advanced to the position of manager of sales, and William R. Fraser, former New York district manager, has been named to fill the vacancy created by this move.

Looking Over Kelvinator-Leonard Products For 1940



Left: Campbell Wood, head of public utility sales for Kelvinator-Leonard, explains Kelvinator's new built-in meat compartment's features to A. L. Palmer, (left) and C. A. Stevens (center) of Public Service Co. of New Jersey. Upper right: Allen Steinert (center), head of All-Eastern Co., Boston distributor, shakes hands on the 1940 program with R. S. Corn (left) and A. P. Maloney of his organization. Lower right: R. L. Parker (right) of Commonwealth & Southern, and Pete Connolly and H. H. Higgins, of South Carolina Power Co.

Krich-Radisco Will Handle Bendix Home Laundry

NEWARK, N. J.—Krich-Radisco, Inc., large major appliance distributorship here, has taken on distribution of the Bendix home appliance line in 12 New Jersey counties.

Stewart-Warner Distributor Opens Branch In Capital

BALTIMORE—David Kaufmann's Sons, Stewart-Warner distributor in this area, has opened a branch operation in Washington, D. C. with Clinton Allen as branch manager.

H. C. Noll Co., Omaha, Takes on Philco Line

OMAHA, Neb.—The H. C. Noll Co. here has been appointed distributor of Philco refrigerators, air-conditioning equipment, and radios for eastern Nebraska and western Iowa.

MESSAGE

ON VALVES

from the MASTER MECHANICS
of REFRIGERATION

"If we could recommend the kind of Expansion Valve used on every refrigeration job we're called on to service, there would be less Service Troubles and more Customer SATISFACTION.

"Reasons for service breakdowns are often hard to locate at first try. If the customer is a good friend of ours, he'll stand for a certain amount of experimenting—but not for long. On many of these jobs, we eventually find that the trouble goes back to the Expansion Valve. If the customer would only let us replace the valve with an A-P, we'd both save a lot of extra Trouble Service Calls."

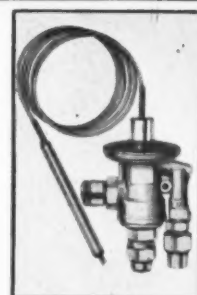
• A-P VALVES AND SOLENOIDS FOR ALL TYPES OF REFRIGERATION INSTALLATIONS •



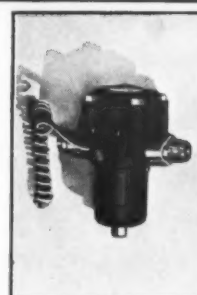
NO. 220 K



NO. 215



NO. 205-C



NO. 78



NO. 73 RB

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